

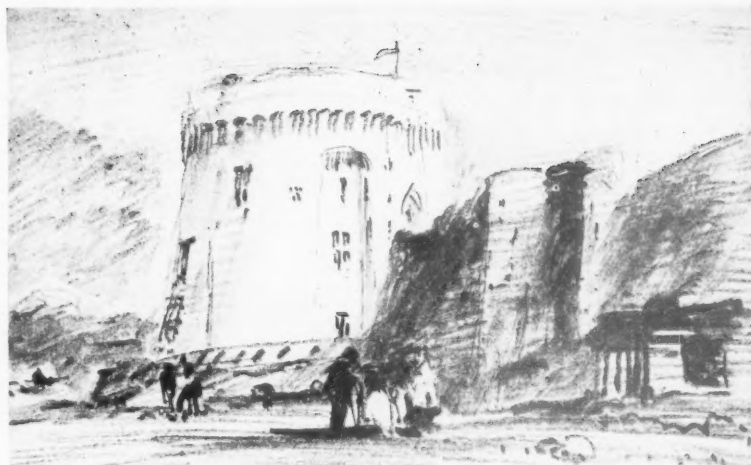
JOURNAL OF THE ROYAL INSTITUTE of BRITISH ARCHITECTS

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Defence against Napoleon. The Martello Tower.
A drawing by Edward Webb from the collection
presented by Mrs. Maurice Webb.

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Journal

THE MINISTRY OF WORKS AND BUILDING

The announcement of the Prime Minister of the formation of a Ministry of Works and Building, with Sir John Reith as Minister, is the big event of the past weeks as far as we are concerned (if we can relegate bombs and the more violent effects of war as something less than the big event). The R.I.B.A. long ago, through Mr. Stanley Hall when he was President, urged the formation of a Ministry, and Mr. Ansell has welcomed the new Ministry in the letter to *The Times* printed overpage. Since then Mr. Ansell has had the benefit of a talk with Sir John Reith, and has been able to represent the Institute's hopes for the new Ministry in greater detail.

No announcement beyond the brief statement of its formation has been made about the Ministry at the time of going to press, so that all talk about what exactly the Ministry will do, its relationship to Land Planning and to Building Science, what controls it may exercise over the personnel of the industry, labour and professional, is pure speculation. We can, however, welcome the formation of a Government Department which, by the mere fact of its existence, is a sign that the Building Industry is at last recognised as a part of national life and economy of first

importance. Without a Ministry it would be impossible for much progress to be made either in the organisation of the Industry for war or for peace. With a Ministry under Sir John Reith, an experienced and imaginative organiser, the future of the industry can be planned to give the best possible service to the country and to avoid waste of the men and women in it.

WAR DAMAGE AND ARCHITECTS' WORK

Since air warfare over England began in earnest architects, and many members of the public, have had it made clear to them what was *one* of the things, at least, for which architects were reserved in those far-off days when architects were reserved and when all our wits said "Reserved for what?" Also, many architects have woken to these urgent duties of repairing damaged buildings and making claims with only the haziest knowledge of the legislation and rules of procedure designed by Parliament and the Ministries. The first article in this number is an attempt to give an outline of the procedure under the two chief Acts controlling war-damage repairs and to describe the present system of applying for compensation.

BUILDING FOR THE FUTURE

The following letter from the President was published in *The Times* on 7 October :—

BUILDING FOR THE FUTURE FUNCTION OF THE NEW MINISTRY A WAR OPPORTUNITY

To the Editor of THE TIMES.

SIR,—On 29 December last you published a letter from the then president of the R.I.B.A. suggesting that one remedy for many of the ills of the Government's war-time building programme would be the creation of a Ministry of Building. The successive reports of the Select Committee on National Expenditure have emphasised the need for some controlling and co-ordinating authority, and yesterday's announcement as to the formation of such a Ministry completes the first stage of an interesting journey.

Sir John Reith will have the good will and can be assured of the cordial co-operation of the architectural profession with him in his new task. Although the position as to the fuller use of the training and experience of the profession in the Government building programme is far better than it was nine months ago there is still a great deal of unfinished work to be done for various Departments. The new Ministry of Building will bring a welcome detachment from some old and bad methods and a power of organisation that together will have beneficial effects.

It is, however, in the possibilities of the Ministry in the future that the imagination is most stimulated, and in this connection I plead for the early and complete recognition of the function of the trained designer and planner in the reconstruction that will follow our final victory in the war. The opportunity must be taken of clearing many areas of inferior houses which have been badly shattered and of providing layouts and new dwellings which shall give the fullest possibilities of healthy lives for our people. Unless there is vision and trained skill in planning from the outset there will be the same dreary failures as in the past. The nation should, even for its smallest houses, have the highest available architectural skill.

Everyone has felt the responsive uplift of spirit, that link of the beholder with the perhaps far-distant designer, that comes of a finely resolved solution of a human problem in building. This is seen in the L.C.C. housing estate at Downham just as truly as in the Orangery in Kensington Gardens or the group on the Acropolis itself, in different degree. It is not present in the stuccoed dullness of much of Belgravia nor the mean streets of the outskirts of many of our towns.

It is for the national good therefore that this appeal is made, not in the narrow interests of one profession, however deserving. The tragedy of past years has too often been that the nation has trained its architects and then declined to use them.

I am, Sir, your obedient servant,

W. H. ANSELL, *President*,
Royal Institute of British Architects.

DAMAGE TO CHURCHES

The following circular on the subject of war damage to churches has been sent to the Bishops by the Royal Institute :—

Air raids may do serious damage to many churches and other ecclesiastical buildings. Under existing arrangements it is possible that demolition squads and repair organisations may get to work at very short notice to deal with the damage. Unless the work they do is guided and supervised from the start by architects who have the necessary knowledge and experience great and irreparable harm may be done. Structure which

might be skilfully preserved may be further destroyed through ignorance of its value and history. Damaged glass may be thrown away where it might have been carefully pieced together and largely reinstated.

In face of these dangers there is urgent need of a widespread organisation which would guard against them.

In the first place every church and ecclesiastical building of value should have, on a reduced scale, the same kind of skilled guard that has been available at St. Paul's Cathedral since the beginning of the war. A small party of faithful workers under the guidance of one or more experienced local architects should be enlisted to keep watch over the building and be instantly available in case of fire.

In the event of structural damage the immediate work of demolition where necessary, or of temporary repair where possible, should be from the first carried out under the instructions of an architect who has special qualifications for work of this kind. The diocesan architect or diocesan surveyor might have too much on his hands at the time or might be unable to reach the spot under war conditions, and there is obvious need for extra skilled help at the shortest possible notice.

It is, therefore, suggested that under the auspices of the Royal Institute of British Architects, and with the help of such bodies as the Society for the Protection of Ancient Buildings, every diocese should possess an approved Panel of Architects with the necessary qualifications upon which the incumbents can at once call for the necessary help.

In every diocese the Bishop could have a list of the names and addresses of those on the Panel, and he could at once circulate the list to every incumbent and impress upon them the great importance of calling upon the services of the nearest available members of the Panel the moment the damage occurs.

THE INDEX

The Index for the current volume of the JOURNAL, which closes with this number, is being printed separately, and will be sent free of charge to all who apply for it. Last year we underestimated the demand, and some of those who have regularly bound their JOURNALS for many years were unable to obtain copies of the index. This year we hope to provide for all applicants. All Public Libraries that receive the JOURNAL should receive an Index as a matter of course. Any who do not are asked to write to the Editor without delay.

The Secretary of the Royal Institute of British Architects has received the following cable from Mr. Edwin Bergstrom, President of the American Institute of Architects :—

"On behalf of architects United States I send understanding sympathy to Royal Institute and its members in the passing of their President, E. Stanley Hall."—EDWIN BERGSTROM.

GOODWILL FROM NEW ZEALAND

The following telegram has been received by the President from Mr. J. M. Dawson, President of the New Zealand Institute of Architects :—

Wellington.

ROYAL INSTITUTE OF BRITISH ARCHITECTS,
66 Portland Place, London

New Zealand Institute expresses its appreciation of wonderful spirit shown by their comrades in the Homeland. Our thoughts are ever with you in this time of trial.—DAWSON, President.

WAR DAMAGE REPAIR AND COMPENSATION

Architects should be familiar with the procedure laid down by the Government in the organisation of war damage repair work. The following notes outline the position at present.

When a building is bombed the local authority, acting under the **Housing (Emergency Powers) Act, 1939**¹, and the **Essential Buildings and Plant (Repair of War Damage) Act, 1939**², are empowered to enter in and repair war damage if they decide that the building is wanted for local housing or essential services.

HOUSING.—The Housing Act states that the local authority can act where they are satisfied:

- (a) That any building, whether a house or not, is in any respect unfit for housing purposes by reason of war-damage; and
- (b) that the building is capable at reasonable expense of being rendered fit for housing purposes; and
- (c) that the lack of housing accommodation in the area of the authority makes it necessary that the building should be rendered so fit; and
- (d) that the person having control of the building is unable or unwilling to carry out the works necessary to render it so fit.

Procedure under the Act was defined first by Ministry of Health *Circular 1810*, issued in August 1939, and has been further clarified by *Circular 2144*, issued in September 1940. *Circular 1810* recommends the immediate execution of "first-aid repairs, e.g., by placing a tarpaulin over the hole in a roof or by temporarily boarding up a hole in the wall." This can be done without any notice being served on the occupants or owners. The service of notices was an unwieldy procedure proposed in the Housing (Emergency Powers) Act, and naturally found impracticable in times of real emergency, though where urgent action is not necessary, according to the Act, the Ministry's consent for the proposed expenditure must be obtained by the authority, who may then serve on the owner a notice of not less than 14 days that they intend to repair.

In deciding how much should be done in addition to first-aid repairs, *Circular 1810* recommends that the authority should select the least damaged houses and "confine the repairs to the minimum necessary to make them reasonably fit as housing accommodation in war-time." Houses which were unfit for human habitation before being damaged would not, save in very exceptional circumstances, be repaired, and "where," the Circular states, "there is a choice, it is clearly better to spend £50 on a house worth £400 than £100 on a house worth only £300."

Circular 2144 urges the completion of first-aid repairs "with the utmost possible speed" (italics in original), except that where repairs are only sporadic and there is labour and time the first repairs may be made semi- or completely permanent. It is clearly more economical to do the whole repair work on, say, a parapet, roof or chimney in one stage, to avoid erecting scaffolding twice and the waste of first-aid materials.

ESSENTIAL BUILDINGS OTHER THAN HOUSING

The **Essential Buildings and Plant (Repair of War Damage) Act 1939** gives similar powers to the local authority where they are satisfied—

- (a) that any building used for purposes which . . . are essential to the welfare of the civil population has become wholly or partly incapable of use for those purposes by reason of war damage; and
- (b) that the buildings can be rendered fit . . . at reasonable cost; and
- (c) that lack of buildings available for the said purposes makes it essential that the building should be rendered so fit.

This Act was explained more fully in *Circular 1848*, issued in September 1939. The types of buildings included under this Act are listed under the headings of the "appropriate Government department," whose responsibility it is, acting on advice from the local authority, to decide whether the buildings are "essential," e.g., bakeries under the Ministry of Food, hospitals under the Ministry of Health, etc.

The Act defines the financial loans that can be made to assist work of this kind. "Generally speaking, the object of the Government is to ensure that the necessary funds for the repairs of such buildings will be available both for local authorities and private owners, but there will be a distinction in that, while in some cases it will be the duty of the local authority to carry out repairs to certain classes of buildings, in the case of the ordinary private owner loans will only be available if he is willing but unable, without financial assistance, to carry out the necessary work."

It is also stated in the Act that whatever work the authority undertakes will be registered as a charge against the property payable to the Government after the war; on the other hand, the Government's compensation scheme to some extent negatives this, since private owners whose property is damaged can claim compensation payable—according to present rules—after the war, and presumably the cost of the work undertaken by the local authority will be part of the claim in the same way as first-aid repairs similarly undertaken.

COMPENSATION

The question of compensation is of first concern to private architects acting for the building owners.

In Ministry of Health *Circular 1811* the procedure in making claims for compensation was outlined. This is related to the scheme for payment of compensation first broached in the *Report of the Committee* [presided over by Mr. A. Andrewes Uthwatt] on the responsibility for the repair of Premises damaged by hostilities³ which was presented by the Lord Chancellor to Parliament in February 1939. This was followed by a conference under Lord Weir's chairmanship, which issued a *Report* in October 1939, in which was published a *Statement of Government Policy on the Report*.⁴

Before the publication of this report another committee had been set up, also under Mr. Uthwatt's chairmanship, to report on the *Principles of Assessment of Damage*. The R.I.B.A. was represented by the late Mr. Stanley Hall. The Government previously had decided that no compensation would be paid until after the war, though a recent statement by the Prime Minister has given hope that some scheme for current payment might be possible. That statement was made before the severe damage of recent weeks began. It has since been stated that an insurance scheme which may vary the existing rules is being prepared.

The Assessment Committee reviewed the whole question of damage assessment, and recommended that, except in the case of buildings such as churches, hospitals, etc., which have no ascertainable market value, damage "to immovable property should be assessed at whichever is the less:

- (a) the cost of reasonable reinstatement estimated by reference to the level of building costs prevailing in March 1934,⁵ credit being taken for the old materials; or
- (b) the diminution in market value, i.e., the difference between the market value of the property in its condition immediately before

³ H.M.S.O. 6d. net.

⁴ H.M.S.O. 4d. net.

⁵ Published in the *Architects' Journal*, 5 Sept. 1940. Architectural Press, 45 The Avenue, Cheam, Surrey. 6d. net.

the damage occurred and its market value in its damaged condition, the value in each case to be calculated on the basis of the market values prevailing in March 1939, assuming the property to be freehold in possession and free from encumbrances and from any burden, charge or restriction other than rates and taxes."

V.O.W. 1

When a building is damaged the owner or his representative (who, we can fairly claim, is most suitably an architect, though he need not be) must submit claim form V.O.W. 1 within 30 days to the District Valuer. The form can be obtained from the office of the District Valuer or local authority.

V.O.W. 1 is the owner's bare statement of his claim. The architect must use his discretion on each job as to how much detail he shall give in the entry and the manner of its presentation. The form will be submitted by the District Valuer to his local valuations panel consisting of professional men who are empowered to judge the merit of each claim, to raise it if necessary or to reduce it. It is reasonable to think that they will be content with a statement, if prepared by a reputable professional man, which gives a spot estimate for a whole job where the work is not complicated or extensive. Certainly nothing so elaborate as a full bill of quantities or an elaborate schedule would appear to be necessary in many cases.

One good way is to price, item by item, on the basis of trades, e.g., bricklayers' work and materials £—; slater and materials £—; etc., etc., and to present the pricing as an *estimate*.

There is no question whatever of getting tenders before filling in V.O.W. 1, and, indeed, in many cases it would only be possible for the work to be done on a prime-cost plus profit basis. Many architects may wish to consult their builders or quantity surveyors before pricing, but this cannot be with the idea of entering more than an "estimate" on the form.

First-aid repairs carried out by the owner should be added to the claim on V.O.W. 1.

It would appear that claims for two or more properties belonging to one owner and damaged on the same date can be entered on a single form.

The Valuer's Office will be much helped and the speed of the work increased if forms are submitted in duplicate. This is not asked for officially, but is welcome, but there may be a difficulty in some districts in getting a duplicate form.

PUTTING THE WORK IN HAND

Once V.O.W. 1 has been submitted the owner has done all he can do to claim compensation. He need not wait until his claim has been accepted before starting repairs. If his building is regarded as essential the local authority will start work, claim or no claim, but if this is not so, and the obligation to repair is the owner's alone, he will probably want to start the work without delay to reconstitute his business, but there are two chief obstructions. First, the fact that he has been bombed may, by the destruction of his business, make him "a man of no substance," who cannot afford to promote repair work for which he will get no compensation until after the war. The architect will not find it easy in such cases to get his fees for the survey. The second obstruction is that the local authorities possess or have prior rights to almost all materials, and the ordinary small private owner will undoubtedly find it difficult to get materials even for quite simple needs. The supplies available for private owners will vary from area to area and according to the quantity and type of damage, but always the local authority must have first claim on available resources for essential work.⁶

⁶ The Ministry of Health has issued a memorandum and list of Selected Stockholders (Distributors of Builders' Supplies Joint Council District Controllers), working under the H.M.O.W. system of emergency reserve of materials. All this organisation of supplies and licensing of building will, presumably, now come under the control of the new Ministry of Building.

Civil building of all sorts costing more than £500 is now controlled by the licensing system described in the Memorandum printed on page 272.

MATERIALS

General instructions on the use of materials were given to local authorities in Ministry of Health Circular 2144, dated 12 September 1940. The fullest possible use is recommended of salvage materials, the collection of which from bombed buildings is now being organised by Sir Warren Fisher (appointed by the Ministry of Home Security), and the use of standard temporary coverings: "roofing-felt, waterproof building paper, asbestos sheeting should be regarded as the normal method of repair."

Local authorities requiring timber for first aid can get a licence immediately on application to the Timber Control Area Officer, and "private owners doing their own repairs may in some cases ask for the local authority's assistance in obtaining timber . . .", "but," the Circular adds, "it will be of great help to the Timber Control if such . . . recommendations . . . [are] given only in cases of obvious necessity."

FEES

The question of formulating a scale of charges for the work entailed in preparing claims has been considered by the War Executive Committee of the Council after consultation with the officers of the Practice Committee.

The War Executive Committee feel that at the moment *quantum meruit* is the only basis they can recommend, as circumstances differ so considerably in each case. They are of opinion that the fee should be agreed by the architect with his client having regard to the time and work involved.

It is too early yet to devise any scale on a percentage basis, but the matter will be reviewed at a later date.

In paragraph 10 of the Final Report of the Committee on the Principles of Assessment of War Damage it was recommended that "professional fees, properly incurred, for the preparation of plans and quantities and for superintendence of the work" should be included in the "costs of reinstatement."

This has left some doubt whether fees for preparing the claim can be included in the claim. It has been suggested that these will be no more accepted by the District Valuer as a separate item than fees for preparing an insurance claim are accepted by the company against whom the claim is made; but as the appropriate fee for reinstatement should be included in the claim, and if the fee for preparing the claim is part of the larger fee for reinstatement, then it will, as a matter of course, form part of the claim, since if repairs are to be properly designed the original survey and estimate is an essential part of the architect's work.

It must be recognised that a vast amount of architects' work will go no further than the survey stage—because of the owner's penury or the shortage of materials, or because, after having a survey made, an owner may in due course "just call in the builder" to do the work. Consequently this question of survey fees is important. If the idea prevails that such fees will not be compensated, there will be general reluctance to employ professional advice.

If, however, the repairs are not actually done, the architect should receive from the owner a proportion of the fee which he would have received had the work been carried out, and it is hoped that the proposed scale of fees will make this clear.

There have been cases brought to the Institute's notice in which it has been suggested by prospective clients that, since they will not be compensated until after the war, the architect should wait for his fees. Architects will have to exercise their discretion in making allowances for their clients' hardship and agreeing to deferment until compensation, but the principle of full and proper fees must not be waived.

This does not, of course, deny members the full right to give their services freely to help poor and distressed householders, action which the Royal Institute wishes to encourage.

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NOTES FROM THE INFORMATION BUREAU
OF THE BUILDING RESEARCH STATION*

ANTI-SCATTER TREATMENTS FOR WINDOW GLASS

Various methods which can be adopted to provide protection from flying glass from windows broken by blast have been described in publications† of the Ministry of Home Security: they include such measures as the provision of various forms of screens and shutters, the fixing of wire mesh and, finally, the application of adhesive treatments to the glass itself. It is with the last-named that this note is concerned. Tests of such materials are undertaken for the manufacturers at the Building Research Station and arrangements have recently been made whereby a list of those of them that have been tested and approved as affording a useful measure of protection by limiting or preventing the scattering of the glass fragments will be kept at the Station and at the Research and Experiments Branch of the Ministry of Home Security. Firms having a material which is included in the approved list will be authorised so to describe it in their advertisements.

In view of the number of enquiries that are being received regarding such treatments, and notwithstanding that it is not the general practice in Government publications to mention proprietary materials by name, it has been considered useful in present circumstances to publish the present note which discusses the various types of adhesive treatments and includes a list of materials that are at present (19/9/1940) on the approved list. The list is subject to alterations by additions and, maybe, subtractions, but the arrangement whereby firms having materials on the approved list can advertise them as such will serve as a means for keeping it up to date. Further, the practical recommendations included in the note are given in the light of information at present available and may be subject to some modification, though practical experience gained so far has served to confirm that they are well founded.

It should be realised that no treatment applied to the glass will prevent its being broken, nor will even increase its chance of remaining unbroken when a bomb explodes near by. Moreover, an approved material will not give good results unless it is properly applied, i.e., applied in accordance with the recommendations made in this note.

The present note mentions four different types of treatment. It is not intended to suggest that all four types afford an equal measure of protection but tests have shown that all the materials named, if properly applied, are useful. The choice of a particular type of treatment for a particular job must be left to the user since it will depend upon various considerations such as the size of the panes, the importance of the windows to be protected, cost, etc. Moreover, supplies of any one type of material may not always be immediately available and possible alternatives may have to be considered.

GENERAL NOTE ON APPLICATION

Before any treatment is applied it is important that the glass should be clean and free from oil or grease. When using any proprietary article, attention should be paid to the manufacturers' instructions for its use.

1. TEXTILE MATERIALS

According to tests, almost any strong textile netting, such as curtain net, or similar fabric can provide good "anti-scatter" protection if it is stuck firmly to the glass.

Nettings can be obtained for the purpose either plain or ready-

treated with adhesive. With the latter type, there are various methods which different manufacturers recommend to get the best results from their own materials, e.g. :—

- (i) Dip the netting in water for one or two seconds only, then shake out the excess water and apply the net to the glass.
- (ii) Moisten the netting by spreading it on a wet cloth.
- (iii) Wet the glass, and then apply the dry netting, patting it into place with a wet cloth.

The material should be cut large enough to allow for shrinkage and to permit of it being carried over the frames and stuck to them as well as the glass.

Plain ungummed netting can be affixed with any convenient strong adhesive, e.g., cold water paste, flour paste or gum. The adhesive is brushed freely on the glass and the netting pressed on. If the window is one which is exposed to hot sunshine the addition of a little glycerine (say 5 per cent.) to the adhesive will help to prevent it from drying out completely and becoming brittle.

In whatever way the netting is fixed, i.e., whether it is of the ready-gummed type or a plain material applied with paste or gum, its adhesion will certainly be affected sooner or later if the netting is repeatedly exposed to damp conditions; if, therefore, the window is one which opens or if it is often subject to condensation, the netting should be protected with a coat of varnish and in fact it is a useful precaution always to varnish round the edges at least, or secure them with adhesive tape to prevent them coming unstuck.

While fixing, it is often convenient to hold the top of the netting in position by drawing pins or (in the case of steel frame windows) with adhesive tape.

Although netting applied in either of these ways will generally be quite effective in preventing glass flying, the treatment will not necessarily be strong enough to hold up large panes of heavy glass and keep the fragments in place after the window is broken. A stronger and also a more waterproof job can be made by bedding the netting in a good elastic varnish; a full coat of varnish is brushed on the glass, allowed to get tacky and the netting applied. Finally, a further coat of varnish is applied over the whole area. As the number of nettings which has been tested is large, the list of those at present approved is given in an appendix to this note.

2. TRANSPARENT FILMS

A good degree of protection can also be obtained by applying transparent film, of which there are many different makes. Those tested have been of two types, namely, cellulose film and cellulose acetate film.

A. (a) Cellulose film.

The following materials have been approved :—

- (1) "CELILYND."

British Celilynd, Ltd.,
Burwell Works,
Lea Bridge, Leyton, E.10.

(In this case the film was reinforced with light textile netting.)

- (2) "CELLOPHANE."

British Cellophane, Ltd.,
17-19 Stratford Place, W.1.

- (3) "DIOPHANE."
- Transparent Paper Co.,
Bury, Lancs.

- (4) "RAYOPHANE."
- British Rayophane, Ltd.,
Wigton, Cumberland.

- (5) "SIDAC."
- British Sidac, Ltd.,
St. Helens, Lancs.

* Crown Copyright Reserved.

† e.g., "A.R.P. Memorandum No. 12—the Protection of Windows in Commercial and Industrial Buildings." "Your Home as an Air Raid Shelter."

To be effective, the thickness of the cellulose film should be equivalent to a "substance" of not less than 60 grammes per quarer metre.

In applying cellulose film it is important that the adhesive should be flexible, i.e., one which does not become brittle on drying. Ordinary liquid gum can be used if glycerine or treacle is added in the proportion of about 1 teaspoonful to 2 table-spoonsful of gum, or alternatively, an adhesive can be made from gum arabic and glycerine as follows:—

Crush the lumps of gum arabic to a powder. Into $1\frac{1}{2}$ pints of hot water sprinkle 1 lb. of the powdered gum, stirring continuously. Keep the mixture hot (in a double saucepan) till all the gum is dissolved, stirring from time to time. Then cool and stir in 7 oz. of glycerine. If glycerine should be unobtainable, treacle may be used instead.

The adhesive should be brushed on the glass and the dry film applied with a roller, preferably in strips, say 4 in. wide and placed side by side. The film should on no account be wetted or dipped in water before it is applied since this weakens the film and is likely to make it ineffective.

(b) **Self-adhesive cellulose film**, i.e., film ready-coated with a tacky adhesive: this type of material is usually supplied in rolls of widths varying from 1 in. to 4 in.

The following materials have been approved:—

- (1) "A.R.P. WINDOW TAPE,"
British Cellophane, Ltd.,
17-19 Stratford Place, W.1.
- (2) "CERRUX,"
Cellon, Ltd.,
Kingston-on-Thames.

(In this case the self-adhesive film is supplied together with a varnish: the two together constituting the "Cerrux Process.")

- (3) "DUREX,"
Durex Abrasives, Ltd.,
Arden Road,
Adderley Park,
Birmingham, 8.
- (4) "SELLOTAPE,"
Adhesive Tapes, Ltd.,
Brunel Road,
Old Oak Common Lane,
Acton, W.3.
- (5) "TRANSOTAPE,"
Messrs. John Goshon & Co.,
1-6 Beech Lane, E.C.1.

Self-adhesive film has the advantage that it needs only to be pressed on the glass (again with the aid of a roller) and gives a better-finished appearance than plain film applied with a separate adhesive. It is not absolutely necessary to cover the whole of the glass with this material but naturally the closer the strips the greater will be the protection (see 3 below).

When using this cellulose film it should be carried to the edge of the glass but not over the frames. The reason is that it tends to shrink slightly on exposure and if attached to the frames it will tend to lift at the edges of the glass.

N.B.—Since cellulose film, whether plain or self-adhesive, is affected by moisture, it is recommended that the treated panes should be given a waterproofing coat of a good pale varnish or lacquer.

B. (a) Cellulose acetate film.

The following materials have been approved:—

- (1) "BEXOID,"
B.X. Plastics, Ltd.,
Hale End, E.4.
- (2) "CLARIFOIL,"
British Celanese, Ltd.,
Celanese House,
Hanover Square, W.1.
- (3) "DIALUX,"
Dufay Chromex, Ltd.,
Elstree, Herts.
- (4) "ERINOFORT,"
Erinoid, Ltd.,
Stroud, Gloucester.

(5) "RHODOPHANE."

Messrs. May & Baker, Ltd.,
42-3 St. Paul's Churchyard, E.C.4.

(b) Cellulose acetate film reinforced with textile netting.

The materials supplied by the following firms have been approved:—

- (1) CELLOFABRICS, LTD.,
11 Gillingham Street, S.W.1.
- (2) MESSRS. DOBSON & M. BROWNE & CO., LTD.,
DelBeta House, Nottingham.
- (3) DUFAY CHROMEX, LTD.,
Elstree, Herts.

Cellulose acetate film cannot be stuck to glass satisfactorily with ordinary gum or paste, but most manufacturers can supply suitable adhesives for their own materials or suggest recipes for making them up.

(c) **Self-adhesive cellulose acetate film**.—This type of film closely resembles in appearance the self-adhesive cellulose film mentioned above and is used in the same way. Varnishing is not quite so necessary in this case as cellulose acetate film is less affected by moisture than cellulose film; nevertheless, varnishing helps to preserve the film and adhesive and is therefore recommended.

The film marketed by the following firm has been approved:—

Durex Abrasives, Ltd.,
Arden Road,
Adderley Park, Birmingham, 8.

3. STRIP TREATMENTS

While treatments which are applied all over the glass, such as those described above, are to be preferred, strips of suitable strong materials spaced apart can often be used with good effect.

Obviously, the wider the strips themselves and the more closely they are spaced, the better. Provided the strips are at least $1\frac{1}{2}$ in. wide and are crossed one over another they may be placed up to 4 in. apart. If narrower strips are used or if the strips are not crossed, they must be placed closer together.

When using proprietary materials in strips, the manufacturers' recommendations should be followed.

Suitable materials for strip application include:—

- (1) The transparent cellulose and cellulose acetate films mentioned in 2 above, particularly the self-adhesive varieties. After applying strips of these materials it is recommended to varnish over the whole area of the glass.
- (2) Self-adhesive cloth tapes—pressing these on the glass with a warm iron helps them to stick better.
- (3) Any strong textile material stuck on the glass.
- (4) Metallic strip applied with a suitable adhesive.

One such which has been tested and approved is "Perma Led," supplied by

Perma Led Metal Co., Ltd.,
41 King William Street, E.C.4.

Thin brown paper is not very effective, but stout brown paper strips, closely spaced and well stuck to the glass, will provide some protection.

4. LIQUID COATINGS

A large number of liquid preparations based on rubber latex or synthetic resins have been placed on the market as "anti-shatter" coatings, but the general impression gained at the Station as to their value has not been very favourable since so many of those tested have been either ineffective in the first instance or have become so after a few weeks on the window.

The standard of durability which is at present adopted in tests on these liquids at the Building Research Station is that they should retain their efficacy for at least four months under normal conditions of exposure. In the case of rubber latex compositions, no accelerated ageing test is yet available which would serve to show whether a material submitted is likely to have the necessary durability; hence it is necessary to rely on natural exposure for four months before approval can be given.

In the case of synthetic lacquers, however, a heating test has been devised which serves to eliminate the more short-lived materials. If a material passes this test the Station is prepared to receive any authentic evidence which the manufacturers can furnish regarding its durability, for consideration with a view to granting provisional approval.

So far two materials, named below, have been found under actual test to remain effective for at least four months and there are some half-dozen others which have given promising results under the heat test; these are being further investigated.

The two approved materials are:—

- (1) "ARPCO."
The Calico Printers' Association, Ltd.,
St. James Buildings, Oxford Street,
Manchester, 1.
- (2) "SLICK."
Slick Brands, Ltd.,
Waddon, Croydon.

APPENDIX

TEXTILE NETTINGS

The preparation of a standard specification for textile nettings for window protection is under consideration. This specification may have the result of bringing about an increase in the degree of protection provided by netting treatments.

In the meantime, the following nettings have been approved on the basis of present tests:—

Name and Address of Makers	Number or Designation of Nettings Approved
R. E. Ashworth & Co., Ltd., 37 Stoney Street, Nottingham.	(i) "Sunenta" large squares (ii) " " small (iii) " " patterned
Wallis Binch, New Basford, Nottingham.	(i) No. 22 (ii) No. 7682
Black Bros., Ltd., Stoney Street, Manchester.	Anti-splinter net.
Carey & Sons, Ltd., 45 Broad Street, Nottingham.	Splinterproof Nets. Nos. 9643 027743 22 810573 0210135
Edward Cope & Co., Ltd., High Church Street, New Basford, Nottingham.	No. 72 or No. 147.
Daybrook Fabrics, Ltd., Youngs Factory, Alfred Street South, Nottingham.	(i) Dessanita Quality No. 1. (ii) " " " No. 2.
John Dickinson & Co., Ltd., Home Park Mills, Kings Langley, Herts.	" Splinternet."
Dobsons & M. Browne & Co., Ltd., DelBeta House, Nottingham.	(i) No. GF 3698 (ii) No. GF 3958 (iii) No. 10489-GF3169½
Frymann & Fletcher, Ltd., Clyde Works, Denison Street, Nottingham.	Splinterproof Nets. No. 75894 No. 75803 No. 75703
M. Jacoby & Co., Ltd., Nottingham.	No. 9387
Alexr. Jamieson & Co., Ltd., Darvel, Ayrshire.	No. 7505
Harry Johnson (Nottingham), Ltd., 38 St. Mary's Gate, Nottingham.	No. 4508
Key A.R.P. Products, Keystone House, Adeline Place, W.C.1.	Splinterproof white netting.
W. J. & T. Lambert & Co., Ltd., Talbot Street, Nottingham.	(i) Back glued net. (ii) Impregnated net. (iii) Mosquito net.
Levin Bros. & Co., Ltd., Middle Pavement, Nottingham.	(i) No. 9061 (ii) No. 9062
Alex. Morton & Co., Ltd., Darvel, Ayrshire.	Anti-splinter nets, Nos. 70 70 1

It cannot be too strongly emphasised, however, that to be effective and durable these materials must be applied so as to give a fairly thick coating. A thickness of not less than 2/1000 in. should be aimed at and this means that at least two good coats, in addition to any priming treatment recommended, should be applied.

A lack of durability may not be so serious a matter if a fresh coat of the liquid is applied from time to time, say about every two months. The need for this, however, may not always be apparent, since treatments often become ineffective (by becoming brittle) without any change in their appearance.

For large panes of glass, liquid treatments alone are not recommended; in general, some other means of protection should be adopted, but a liquid treatment might be used in a supplementary capacity, e.g., for treating areas of clear glass between strips of material such as those mentioned in 3 above. It is also possible to reinforce a liquid treatment by embedding a textile netting or transparent film in the coating.

R. Newbold, Kayes Walk, Nottingham.	Anti-splinter, anti-dazzle.
A. & F. H. Parkes (Nottingham), Ltd., Anglo-Scotian Mills, Beeston, Notts.	"Nuart" Anti-splinter net.
C. & J. Robertson, Ltd., Ladeside Factories, Galston, Ayrshire.	(i) No. AS1 (ii) No. AS250
Stirling Bros. & Co., Ltd., Darvel, Ayrshire.	(i) No. 14960 (ii) No. 34961/x
Frank Tatham, Ltd., 12 Plumtre Street, Nottingham.	No. 252
L. O. Trivett, Ltd., Trivetts Buildings, Short Hill, Nottingham.	(i) No. A4558 (ii) No. A4559
Wallace & Co. (Netherplace), Ltd., Netherplace, Newton Mearns, nr. Glasgow.	(i) No. A1 (ii) No. A2
George Walton & Sons, High Pavement, Sutton-in-Ashfield.	Anti-splinter net
J. & J. Wilson & Co., Ltd., Greenhead Mills, Newmilns, Ayrshire.	A.R.P. Nets, Nos. 830 836 8694A 9061
A. Herbert Woolley & Co., Ltd., Nottingham.	(i) No. 0800 1 (ii) No. 0801 1 (iii) No. 0802 1

All the above nettings were supplied ready-treated with adhesive. In addition the following untreated netting has been tested in conjunction with various separate adhesives and given satisfactory results:—

Whiteley, Stevens & Co., Ltd., Stapleford No. 6152
nr. Nottingham.

Further, the following nettings have been tested in conjunction with special varnishes or lacquers supplied with them for use both as the adhesive and as a subsequent coating, and have been found to be satisfactory:—

1. BEAVER ANTI-SPLINTER VARNISH AND NETTING.
Beaver Paint Co., Ltd.,
20 Tithebarn Street,
Liverpool, 2.
2. CLERUX SHATTER RESISTING VARNISH S.3615 AND REINFORCING FABRICS NOS. 1, 2 AND 3.
Cellon, Ltd.,
Kingston-on-Thames.
3. ANTI-SPLINTER LACQUER AND NETTING.
A. Holden & Sons, Ltd.,
Bordesley Green Road, Birmingham, 9.
4. FOCHOW SHATTERPROOF COMPOUND AND NETTING.
Donald Macpherson & Co., Ltd.,
21 Albion Street, Manchester.

CONTROL OF CIVIL BUILDING AND CONSTRUCTIONAL OPERATIONS

Notes for the Guidance of Applicants

1. No work of building or civil engineering construction may be undertaken or continued without the consent of the appropriate authority.

In order to conserve materials and labour urgently required for the national War effort, it has been decided that from 7 October 1940 no work or building or civil engineering construction shall be permitted in the United Kingdom without consent to undertake or complete such work being first obtained, unless otherwise specially provided for (Defence (General) Regulation 56A). In general, therefore, consent must be obtained for work of any of the following categories :—

- (i) the construction, reconstruction or structural alteration of a building ;
- (ii) the construction, reconstruction or structural alteration of any railway line or siding, tramway, dock, harbour, pier, quay, wharf, canal, inland navigation, tunnel, bridge, road, viaduct, waterworks, reservoir, pipe-line aqueduct, sewer, sewerage works, gas undertaking, or other fixed works of civil engineering.

2. Cases where consent is not required.

No consent is, however, required in the following cases :—

- (i) if the estimated cost of undertaking or completing the work involved does not exceed £500 ;
- (ii) if the work is being done on behalf of a Government Department or in pursuance of a contract for the work made with a Government Department ;
- (iii) if a Government Department has agreed to pay the cost, either in whole or in part, of the work involved ;
- (iv) if the work is being done by a local authority in discharge of its functions under the Civil Defence Acts, 1937 and 1939 ;
- (v) if the works are in the nature of maintenance, running repairs or decoration ;
- (vi) if the work falls within any of the categories set out in Appendix A or B and is in progress on 7 October 1940.

3. Alternative forms of consent.

In the case of a building or constructional operations of the classes referred to in Appendix A or B, consent will take the form of an Authorisation issued by the appropriate Authority specified in the Appendix.

In the case of a building or constructional operation of any other class, consent will take the form of a Licence issued by the Commissioners of Works.

4. To whom application for consent is to be made.

A. CONSENT UNDER AUTHORISATION :—

If the work falls within one of the categories set out in Appendix A or B (which are mainly related to the discharge of functions by a local authority or a public utility undertaking) all applications and enquiries should be addressed to the Authority named in Appendix A or B.

B. CONSENT UNDER LICENCE :—

All applications for, and enquiries regarding, Licences should be addressed to :—

The Licensing Officer, H.M. Office of Works,
at the address appropriate to the district in which the work proposed is to be carried out or performed. For the appropriate address, the applicant should consult the list of addresses given in Appendix C.

5. Desirability of early application for Licences to commence new Undertakings.

Any persons desiring to undertake building or constructional operations, for which consent is necessary under the Regulations,

should in all cases make their application at the earliest possible date after their decision to undertake the work in question. Unless this is done, time and labour may be wasted in cases where Licences are refused. Another reason for making early application is that consent may be granted subject to conditions, e.g., to restrictions concerning the use of certain materials which may necessitate the applicant having to recast his proposals in whole or in part. Further, the consent may be limited so as to authorise the execution of part of the work only.

N.B.—If any such condition or limitation is contravened or not complied with, then, whether or not the authorisation or licence is revoked, the person having control of the operation in question will be guilty of an offence against the licensing Regulation.

6. Conditions covering the issue of a Licence in the case of works already in progress.

In the case of building or constructional operations already in progress on 7 October 1940 and in which the estimated cost of completing the work exceeds £500, application for a Licence to continue should be made within 14 days, i.e., not later than 21 October 1940. If this is done, the execution of the work may proceed until the application has been disposed of, either by the issue or the refusal of a Licence. Any such Licence may be limited by conditions similar to those referred to in paragraph 5.

N.B.—An Authorisation to continue is not required in respect of any work falling within any of the categories listed in Appendix A or B.

7. Failure to comply with Regulation.

Failure to make due application for consent in cases where consent is necessary will constitute an offence against the Regulation and the offender will :—

- (a) on summary conviction, be liable to imprisonment for a term not exceeding three months or to a fine not exceeding £100, or to both ;
- (b) on conviction on indictment, be liable to imprisonment for a term not exceeding two years or to a fine not exceeding £500, or to both.

It will, however, be a defence for a person charged with an offence against the Regulation to prove that, immediately before the commencement of the operation in question or, where the operation was commenced before 7 October 1940, immediately before that date, he had reasonable ground for believing that the cost of the operation, or the cost of completing it, as the case may be, would not exceed £500.

It will also be a defence for a person charged with an offence against this Regulation in respect of the execution of work consisting of reconstruction undertaken for a purpose falling within one of the categories specified in Appendix A or B hereto, to prove that the acts done without authorisation were urgently necessary for that purpose and were undertaken in circumstances of emergency which rendered it impracticable for the required authorisation to be obtained. For example, if railway tracks, water mains, etc., suffer war damage from air attack their repair can be carried out immediately without obtaining the authorisation which would otherwise be required.

8. Protection of a person under statutory obligation to execute building or constructional operations.

If a person is required by or under an enactment to execute any work of building or civil engineering construction in respect of which an Authorisation or Licence is required, then provided that such person has made due application for an Authorisation or Licence he will not be treated as having failed to execute his statutory obligation if the failure is due to the refusal of his application or to the imposition of conditions or limitations in the Authorisation or Licence.

9. Application for controlled materials still necessary even though consent is granted.

The granting of an Authorisation or Licence does not mean that controlled materials will automatically become available for the work in respect of which the Authorisation or Licence is granted. If consent is given a Form of Application for the allotment of controlled materials will be sent to the applicant to complete and return to the appropriate authority as soon as the applicant is ready to invite tenders for the execution of the work. It is important that the application for controlled materials should not be deferred beyond that stage, as the position as to the availability of materials may have altered since the original consent was given, thereby necessitating a further modification of the applicant's proposals.

The application for controlled materials should be returned to the authority which issued the Authorisation or Licence. If, therefore, the building or constructional operation falls within one of the categories listed in Appendix A, the application should be made to the authority specified therein. In all other cases the application should be made to "The Licensing Officer, H.M. Office of Works," at the appropriate address, given in Appendix C.

If the building or constructional operation is one which falls within the scope of Paragraph 2 hereof, *i.e.*, one for which no consent at all is required, then the application for controlled materials should be addressed:—

in case (i) to the Department (*i.e.*, the Office of Works or the Department named in Appendix A or B) to which application for an Authorisation or Licence would have been made had the estimated cost of the work involved exceeded £500 ; or

in cases (ii) or (iii) to the Government Department concerned ; or

in case (iv) to the Ministry of Home Security ; or

in case (v) as in case (i), except for Timber, for which it should be addressed to the Area Officer of the Timber Control ; or

in case (vi) to the Department to which application for an Authorisation would have been made if an Authorisation had been required.

10. Application to Scotland.

Regulation 56A also applies to Scotland, so that where the work of building or civil engineering construction to be performed is situate in Scotland the foregoing directions are equally applicable. Applicants should, however, note that Appendix B takes the place of Appendix A in all Scottish cases and that in cases which do not fall within the scope of Appendix B applications for, and enquiries regarding, Licences should be addressed to:—

The Licensing Officer, H.M. Office of Works, 122 George Street, Edinburgh, 2.

11. Application to Northern Ireland.

This forms the subject of separate Instructions issued by the Ministry of Commerce, Chichester Street, Belfast.

APPENDIX A

Purpose of Undertaking

Authority

1. The discharge by a local authority of functions for any purpose not being a purpose specified in the subsequent provisions hereof. The Ministry of Health, Whitehall, London, S.W.1.
2. The discharge by a local authority of functions under the Education Acts, 1921 to 1937. The Board of Education, Alexandra House, Kingsway, London, W.C.2.
3. The discharge by a highway authority of any of their functions. The Ministry of Transport, Metropolitan Buildings, Northumberland Avenue, London, W.C.2.

4. The carrying on of the following public utility undertakings:—

- (a) An undertaking for the supply of electricity. The Electricity Commissioners, Savoy Court, Strand, W.C.2.
- (b) An undertaking for the supply of gas. The Board of Trade, Great George St., S.W.1.
- (c) An undertaking for the supply of water. The Ministry of Health, Whitehall, London, S.W.1.
- (d) A railway, light railway, tramway, road transport, inland water transport, canal, inland navigation, dock, harbour or pier undertaking. The Ministry of Transport, Metropolitan Buildings, Northumberland Avenue, London, W.C.2.
- (e) A sewerage or sewage disposal undertaking or an undertaking for the collection or disposal of refuse. The Ministry of Agriculture and Fisheries, 23-25 Soho Sq., London, W.1.
- (f) An undertaking of a drainage authority. The Board of Trade (Mines Dept.), Dean Stanley St., Millbank, S.W.1.

5. The carrying on of mining or quarrying operations.

APPENDIX B (Scottish Applications)

Purpose of Undertaking

Authority

1. The discharge by a local authority or any of their functions relating to roads, omnibuses, trams, trolley vehicles and garages therefor. The Ministry of Transport, Metropolitan Buildings, Northumberland Avenue, London, W.C.2.
2. The carrying on by a local authority of an undertaking for the supply of electricity. The Electricity Commissioners, Savoy Court, Strand, W.C.2.
3. The discharge or carrying on by a local authority of any function or undertaking other than as aforesaid. The Secretary of State, Scottish Home Dept., St. Andrew's House, Edinburgh, 1.
4. The carrying on of any of the following public utility undertakings by a body other than a local authority:—
 - (a) An undertaking for the supply of electricity. The Electricity Commissioners, Savoy Court, Strand, W.C.2.
 - (b) An undertaking for the supply of gas. The Board of Trade, Gt. George St., S.W.1.
 - (c) An undertaking for the supply of water. The Secretary of State, Scottish Home Dept., St. Andrew's House, Edinburgh, 1.
 - (d) A harbour or pier undertaking to which Part III of the Harbours, Piers and Ferries (Scotland) Act, 1937, applies. The Secretary of State, Scottish Home Dept., St. Andrew's House, Edinburgh, 1.
 - (e) A railway, light railway, tramway, road transport, inland water transport, canal, inland navigation, dock, harbour or pier undertaking (other than such a harbour or pier undertaking as aforesaid). The Ministry of Transport, Metropolitan Buildings, Northumberland Avenue, London, W.C.2.

5. The carrying on of mining or quarrying operations. The Board of Trade (Mines Dept.), Dean Stanley St., Millbank, S.W.1.

APPENDIX C

List of local addresses of Licensing Officers of H.M. Office of Works

1. **NORTHERN REGION** (Northumberland, Durham, Yorkshire (N. Riding)).—*The Licensing Officer, H.M. Office of Works, 81 St. Mary's Place, Newcastle-on-Tyne.* (Tel. No.: Newcastle 23503 7.)

2. **N.E. REGION** (Yorkshire (E. & W. Ridings), York C.B.).—*The Licensing Officer, H.M. Office of Works, Century House, South Parade, Leeds.* (Tel. No.: Leeds 30517.)

3. **N. MIDLAND REGION** (Derbyshire (less the portion in No. 10 Region), Nottinghamshire, Lincolnshire (Holland, Kesteven and parts of Lindsey), Leicestershire, Rutland, Northamptonshire, Soke of Peterborough).—*The Licensing Officer, H.M. Office of Works, Commerce Chambers, Parliament Street, Nottingham.* (Tel. No.: Nottingham 40039.)

4. **EASTERN REGION** (Huntingdonshire, Cambridgeshire, Norfolk, Suffolk, Bedfordshire, Isle of Ely, Essex (less the portion in No. 5 Region), Hertfordshire (less the portion in No. 5 Region)).—*The Licensing Officer, H.M. Office of Works, Block "A," New Court, Trinity College, Cambridge.* (Tel. No.: Cambridge 55206.)

5. **LONDON REGION** (County of London—Middlesex: West Ham C.B., East Ham C.B., Waltham Holy Cross U.D., Chingford U.D., Chigwell U.D., Dagenham U.D. Essex: Wanstead and Woodford U.D., Walthamstow Borough, Ilford Borough, Leyton Borough, Barking Borough. Kent: Penge U.D., Erith Borough, Bexley Borough, Crayford U.D., Chislehurst and Sidcup U.D., Orpington U.D., Beckenham Borough, Bromley Borough. Surrey: Croydon C.B., Richmond Borough, Barnes Borough, Wimbledon Borough, Kingston-on-Thames Borough, Malden and Coombe Borough, Sur-

biton Borough, Mitcham Borough, Sutton and Cheam Borough, Epsom and Ewell Borough, Carshalton U.D., Merton and Morden U.D., Beddington and Wallington Borough, Coulsdon and Purley U.D., Banstead U.D., Esher U.D. Hertfordshire: Cheshunt U.D., Barnet U.D., East Barnet U.D., Bushey U.D., Barnet R.D. Watford R.D.: Parish of Aldenham only).—*The Licensing Officer, H.M. Office of Works, Abell House, John Islip Street, London, S.W.1.* (Tel. No.: Victoria 4422.)

6. **SOUTHERN REGION** (Oxfordshire, Buckinghamshire, Berkshire, Hampshire, Isle of Wight, Surrey (less the portion in No. 5 Region). Dorsetshire: Poole Borough, Wimborne Minster U.D., Wimborne and Cranborne R.D.).—*The Licensing Officer, H.M. Office of Works, 171 King's Road, Reading.* (Tel. No.: Reading 60263.)

7. **S.W. REGION** (Gloucestershire, Wiltshire, Dorsetshire (less the portion in No. 6 Region), Somerset, Devonshire, Cornwall).—*The Licensing Officer, H.M. Office of Works, 10 Woodland Road, Bristol, 8.* (Tel. No.: Bristol 33065.)

8. **WALES REGION** (Wales and Monmouthshire).—*The Licensing Officer, H.M. Office of Works, 43 Park Place, Cardiff.* (Tel. No.: Cardiff 8460.)

9. **MIDLAND REGION** (Shropshire, Staffordshire, Warwickshire, Worcestershire, Herefordshire).—*The Licensing Officer, H.M. Office of Works, Somerset House, Temple Street, Birmingham.* (Tel. No.: Midland 3591.)

10. **N.W. REGION** (Cumberland, Westmorland, Lancashire, Cheshire. In Derbyshire the following: Buxton Borough, Glossop Borough, New Mills U.D., Whaley Bridge U.D., Chapel-en-le-Frith R.D.).—*The Licensing Officer, H.M. Office of Works, 76 Newton Street, Manchester.* (Tel. No.: Central 6561.)

11. **SCOTLAND REGION** (Scotland).—*The Licensing Officer, H.M. Office of Works, 122 George Street, Edinburgh, 2.* (Tel. No.: Edinburgh 23053.)

12. **S.E. REGION** (Kent (less portion in No. 5 Region), Sussex (East and West)).—*The Licensing Officer, H.M. Office of Works, 6-8 Mount Ephraim, Tunbridge Wells.* (Tel. No.: Tunbridge Wells 3325.)

SOIL MECHANICS

THE SCIENCE OF FOUNDATIONS AND EARTHWORKS

Research in the last fifteen years or so has contributed to an understanding of foundation and earthwork problems which has put an entirely new complexion on the practical treatment of them; they can now be handled with a degree of confidence which could scarcely have been visualised fifteen years ago. A new branch of applied science has been established which, for want of a better term, is known as Soil Mechanics. Though this new science is still in its beginnings, it is already capable of giving considerable help in the solution of problems relating to building and engineering work.

The science is of interest to the architect more particularly in relation to the problems of the settlement of buildings. For the solution of most foundation problems the architect relies on his practical experience. His first consideration is to assess the bearing capacity of the ground at the site of the proposed building so that he can decide what size to make his footings, or whether he will have to use a more elaborate type of foundation, such as piles. If he has had experience with similar buildings in the neighbourhood, this presents no difficulty; if he is not familiar with the neighbourhood he can gain a valuable lead from the examination of similar buildings in the locality. Local

byelaws also may provide a guide, though diversity of the ideas expressed in byelaws as to what is suited to different localities emphasises the need of paying due regard to local conditions. The architect may also refer to the tables of allowable bearing pressures for different types of soil contained in books of reference, but these provide little assistance owing to the indefinite terms used to describe different soils. He may decide to carry out tests; borings and test pits are made, and information obtained from visual examination of soil samples is considered in conjunction with the results of traditional bearing tests. Such information is only of value, however, if the soil conditions at the site and the type of structure are not very dissimilar from those with which his experience has been gained. If conditions are radically different, no dependable lead is forthcoming, and it is in such cases that the methods of soil mechanics can be of the greatest value.

The advantage of the new science is that it has made possible a more rational approach to problems of design. This is the result of several lines of research, which, broadly speaking, may be classified as follows:—

- (1) Systematic observations of the movements of actual structures: a study of the behaviour of soils in practice.

- (2) The study of soil properties and laboratory tests on samples to obtain a quantitative measure of important soil characteristics.
- (3) The development of theoretical methods of analysis to enable the behaviour of a structure to be forecast.

Although much work remains to be done, the position has now been reached in which the practical problems of foundations can be handled with much greater understanding than before.

The analysis of foundation problems based on the results of quantitative soil tests is a specialist subject, and it is not possible in a short note to give details of the methods used. However, the following notes should be found to provide a convenient summary of the factors involved.

- (1) The allowable pressure on a footing is not simply a function of the soil. It depends on the size of the footing, the depth at which it is placed and the presence of other footings in immediate proximity.
- (2) Excessive loading causes a failure of the soil in shear, the soil tending to move out from beneath the loaded area. Bearing tests can give an idea of this loading if the soil is homogeneous. With variable strata the failing load is best estimated from the results of shear tests on samples from the different strata.
- In most cases, however, the loading must be kept well below this upper limit.
- (3) Every structure settles to a certain extent both during and after construction. For buildings of normal flexibility the settlement is always unequal, although the load may be uniformly distributed over the surface of a uniform stratum.
- (4) From the point of view of the structure the controlling factor in foundation design is the differential movements which can be allowed between different parts of the building without inducing excessive stresses in the superstructure. Thus the type of structure is an important consideration in assessing the allowable pressure on the footings. The more flexible the structure the more easily can it follow differential movements without introducing excessive secondary stresses.
- (5) The progress of settlement with time depends on the nature of the foundation strata. With buildings on cohesionless soils, sands and gravels, the major portion of the settlements occurs during construction. With buildings on thick beds of clay the movements continue for a considerable time after construction is completed, and may finally attain a settlement many times greater than that produced during construction. In such cases the factor of safety of the structure decreases with time.
- (6) The structural load influences soil strata to a depth of at least $1\frac{1}{2}$ times the width of a footing. In fact, if footings are closely spaced the influence may extend to $1\frac{1}{2}$ times the width of the building. It is, therefore, important to have a knowledge of the soil strata to the depths indicated above. Test pits are usually not deep enough. With small scale bearing tests, the zone of influence extends only to the surface strata and the results can be very misleading unless the soil is homogeneous to a considerable depth. The cause of many cases of excessive settlement has been traced to the compression of a deep-seated soft layer.
- (7) The number of borings should be sufficient to indicate the variation in soil strata in a horizontal direction over the whole site, and should extend to the depths indicated above.

Undisturbed soil samples should be obtained for examination and tests, and there are boring firms in this country who can procure such samples on request.

Wash borings are of little value, and the visual inspection of disturbed auger samples is not sufficient for identification purposes.

- (8) Structures on piled foundations may be considered by methods similar to those indicated above.

The estimation of the allowable load per pile from pile driving records may give quite erroneous results. The behaviour of a group of piles under load is not the same as the behaviour of a single pile in a loading test.

- (9) Pile driving may have harmful effects in certain cases. With some types of clay a substantial lowering of strength may result from the driving of piles into it.

With waterlogged sands the vibrations resulting from pile driving may have an adverse influence on other structures in the vicinity.

- (10) The structural load is not the only thing to consider in foundation problems.

Lowering of the ground water-level may result in a substantial settlement of a building.

With buildings on shallow foundations, the shrinkage and expansion of the soil within the zone of seasonal drying may damage the structure. Rapidly growing trees, such as poplars, if in close proximity to the building, may exaggerate this effect.

The development of this subject has for the most part been due to research work abroad. It is, perhaps, for this reason that the usefulness of the new methods is not widely appreciated in this country, whereas in many foreign countries the new science forms an established part of the equipment for dealing with building and engineering problems. The Proceedings of the First International Conference on Soil Mechanics and Foundation Engineering, held in U.S.A. in 1936, gave ample evidence that even then the new methods were being extensively applied in America and elsewhere. These volumes contain a number of papers describing practical problems in which the knowledge derived from soil tests was directly applied. To give but one example, reference may be made to a paper by Mr. C. S. Proctor, an American worker, describing the problem of the foundation of the Palace of the Soviets in Moscow (Paper N.1. Vol. 1). Here both the geology of the site and the type and design of the superstructure presented special features.

The geological cross section showed limestone bedrock at a depth of 45 metres beneath the surface. Above this were two beds of limestone separated from each other and from the bedrock by intervening beds of marl. The upper limestone bed, situated at a depth of 13 metres and covered by sands and gravel was, however, badly shattered by glacial action, and it was a question of whether the structure could be founded on the intermediate bed of sound limestone, the top of which was 31 metres beneath the surface, or whether it would be necessary to found on the bedrock, a much more expensive and hazardous undertaking. The intermediate limestone bed varied in thickness from a minimum of 4 metres to a maximum of $8\frac{1}{2}$ metres, and the marl between it and bedrock showed not only a variation in thickness from $4\frac{1}{2}$ metres to 10 metres, but was also variable in character in some parts consisting of an incompressible marl limestone, while in others readily compressible marl was encountered.

The superstructure design was one which could only allow of slight differential movements, and hence it was essential to have a fairly close idea of the probable movements of the foundation soil in order to evolve a satisfactory design for founding on the intermediate limestone bed.

This, however, was made possible as the result of an analysis of the problem based on information obtained from compression tests on a number of undisturbed samples taken from the marl stratum.

The author concludes his paper by saying with reference to soil mechanics methods that "without this relatively new engineering tool, the best assumptions as to the subsoil compressibility would have been inadequate, and the only alternative would have been a foundation supported on the deep third limestone which would have involved a very considerable increase in cost, in time, and in hazard of installation."

Since that time there have been many other published examples of problems in which soil mechanics' investigations have been used to aid in deciding the best means of construction on difficult sites. In America in particular the new methods are applied as a matter of routine in connection with many large and important construction works. That the subject has attained an established position abroad is also shown by the fact that a number of soil testing laboratories exist to which architects and engineers may turn for information to assist in the designing of foundations and earthworks.

In this country the position is nothing like so advanced, but progress is being made. A special section is devoted to a study of the general subject at the Building Research Station. Problems of specific application to roads are being

studied at the Road Research Laboratory; on the educational side special courses on the subject are being given at a number of Civil Engineering Schools; in addition, some companies are equipping soil testing laboratories of their own for the consideration of foundation problems with which they are concerned. During the past few years the Building Research Station has been called upon to carry out a number of soil investigations in connection with practical foundation problems. Some of these have been made prior to the commencement of construction, the information so obtained being used for design purposes, but in many cases the soil investigation has only been called for as the result of trouble arising during or after construction. It is obviously desirable that available information should be used in the design stage wherever possible, and this calls for a wider appreciation of the subject on the part of those concerned with practical problems, engineers, architects, etc. Also a much closer contact between the research worker and the practical man is needed if the new science is to develop and take its proper place in the practice of this country.

It is not to be expected that architects in general should become fully conversant with the details of the methods of what is still a highly specialised subject. But it is suggested that it is important that architects should know that the methods exist and see that advantage is taken of them in practical problems presenting unusual features.

Book Reviews

A GREAT WORK OF SCHOLARSHIP

EARLY MUSLIM ARCHITECTURE: PART II (A.D. 751-905). By K. A. C. Creswell. Oxford: At the Clarendon Press. 10 guineas net.

The need for economy of paper unfortunately precludes a detailed review of this immense work of research and erudition. It covers a period of history commonly included under the nickname of "The Dark Ages," but sheds a great deal of light upon many buildings hitherto inadequately described and illustrated. The author follows the same methods that he adopted in his first volume published eight years ago, combining exhaustive literary research with careful first-hand examination of each building; and he is able to say of this second volume that it "contains a study of every known Muslim monument" belonging to the period. The study as a whole, like the actual format of the book itself, is truly colossal in scale; and all future writers of histories of architecture—particularly of mediæval architecture—will be driven to this source of authentic and primary information. The buildings described and illustrated extend from Spain to Persia. The most important of them are the palaces of Ukhaidir and Samarra; the great mosques of Cordova, Qairawan, Samarra, Susa and Tunis; the mosques of 'Amr and Ibn Tulun at Cairo; the later parts of the mosque of Al Aqsa at Jerusalem; and the Nilometer at Cairo, which Mr. Creswell persuaded the authorities to uncover, at great expense and risk, in 1925-27. His successful persistence in obtaining entry to many mosques jealously closed to visitors is remarkable, and only in one case (at Tunis) was he foiled. In that rare case, however, he obtained a plan, full particulars and photographs from elsewhere. Architectural students of all ages, whether interested in Muslim architecture or not, should study the magnificent plans, historically coloured, made by Mr. Creswell himself and reproduced here: they are models of their kind. The author is also responsible for the

bulk of the fine photographs, which fill 123 large pages. Among them, those of ornamental panels in mosques at Jerusalem and Cairo are especially noteworthy. Besides an impressive chronology and a good index there is a commendable innovation in this volume: a two-page summary of its vast contents.

MR. BAGENAL'S POEMS

SONNETS IN WAR AND PEACE. By Hope Bagenal. Oxford University Press. 5s.

These verses, written between 1915 and 1931, have a quietness of spirit which seems remote from the world in which we live to-day. For that quality many will enjoy them, though for younger readers who have been brought up between two wars, and whose consciousness during the last ten years has been dominated largely by the social and political tragedies whose culmination we are now witnessing, these preoccupations may be hard to appreciate. The gentleness of the English countryside has not been very important to them emotionally; their poetry draws its images from other things, and their passions have been concerned more with the people of a changing world than with observation of the changing seasons.

That this conflict exists, is the sharp creative element in life, is seen remotely through the experience of children to be prayed for and watched over from a quiet home at peace.

The swallows have gone and my children have gone also.
I sit at home and peace is in my heart—
Peace in the morning. But my children where are they?

They are away—each on his own destiny—
Encountering the world, exposing their young bodies;
Leaving the storms, the joys, the fierce hearts of men;
Learning to endure the unendurable.

May God who preserves the young swallows—preserve them also.

Mr. Bagenal seems to stand outside both the war and the peace, and by a spiritual effort concerns himself with quieter things, possessing

a sensibility attuned to what is called "loveliness" in scene and event and personality. In doing so he gives no impression of escape; his verse does not express the poignant contrast between the tragic affairs of man and the peaceful rhythms of nature. It is not nostalgic, nor is it angry, nor passionate, for it is above the battle; for him there exists a different world, where contemporary passions scarcely intrude themselves.

It is this very real detachment so finely and sincerely expressed that gives to these verses their special quality. It is country poetry, and acute in its observation and appreciation of natural things. It has been called "topographical," but it is completely different from Mr. Betjeman's "topographical" poetry, for instance, because it draws its inspiration from the natural rather than the civilised aspects of places. And its remoteness is heightened by diction, reminiscent often of Robert Bridges, a consciously elegant and balanced classical form little influenced by the rhythms and colloquialisms of modern everyday speech. Such a remoteness is rare to-day, and one cannot help wondering whether Mr. Bagenal has been writing since 1931, and whether he has been able, or, indeed, whether he has wished, to preserve this detachment.

Accessions to the Library

1939-1940—IV, concluded

Lists of all books, pamphlets, drawings and photographs presented to or purchased by the Library are published periodically. It is suggested that members who wish to be in close touch with the development of the Library should make a point of retaining these lists of reference.

Any notes which appear in the lists are published without prejudice to a further and more detailed criticism.

Books presented by the publishers for review marked

Books purchased marked

* Books of which there is at least one copy in the Loan Library.

BUILDING SCIENCE, continued

SANITARY SCIENCE AND EQUIPMENT

- LEGRANDS, SUTCLIFF & GELL, Ltd. Inf. file
696.11 : 628.11
Legrand's Bulletins:
No. 15. Sand-free water supplies from gravel packed wells. (Aug.)
pam. 9½". Southall. 1940.

A.R.P.

- 699.895 : 72.025.1] 72.083.4
INCORPORATED SOCIETY OF AUCTIONEERS AND LANDED PROPERTY AGENTS.

The Assessment of war damage to property. Professional charges.
leaflet. 9½". [Lond.] 1940.

MINISTRY OF HEALTH

699.895 : 72.025.1] 691
Repair of war damage. [Supply of materials.] (Circular 2101.)
leaflet. dupl. typescript. 8½". 1940. R.

699.895 : 72.025.1] 72.064
Repair of war damage. Permits for making plans and sketches—
Circular 2033. (Memorandum III. A. 30.)
leaflet. dupl. typescript. 9½". 1940. R.

× MS.
699.895 : 728
SILCOCK (R.)

The Design of domestic air raid shelters. (Thesis awarded distinction in Final Examination, July.)

typescript & Penc. D. 13". 1940.
Presented by the Author.

SCIENCE (GENERAL) AND ENGINEERING

ROYAL INSTITUTION OF GREAT BRITAIN

Proceedings. Vol. xxxi, pt. i. No. 144.
1940. 8s. 6d. R.

IRON AND STEEL INSTITUTE

Journal. cxli. 1940 No. 1.
1940. R.

TOPOGRAPHY

STEVENS (H. BERESFORD) 91 (42.48 W+K)
Warwick and Kenilworth. (The "Borough" guides, new series.)
2nd ed. 7½". Cheltenham & Lond.: E.J. Burrow. [193—] 6d.
Presented.

[FRASER (A. E.), editor] 91 (42.545 O)
The Story of Oakham church, school and castle. [With arts. by 3
authors.]
pam. 6½". Gloucester: British Pubg. Co. [1932.] 6d.
Presented.

TOWN AND COUNTRY PLANNING

SHARP (THOMAS) 711
Town planning. (Pelican books, A 66.)
7½". 152 (incl. xiv) pp. + pls. Harmondsworth:
Penguin Books. 1940. 6d. P.

LONDON COUNTY COUNCIL 711.3—162 (42.1)
Draft planning scheme for Area IV (South-West) etc.—Town and
Country Planning Act, 1932. (No. 3368.)
pam. 12". Lond.: P.S. King. 1938. 1s.
Presented by Mr. J. E. Yerbury [F.].
Maps accompanying: see Drawings entry.

DRAWINGS, &c.

LONDON, county
[Town planning maps.] County of L— planning scheme. Area
IV (S.-W.). Draft scheme: Map A, Map B. (London County
Council. [Based on O.S.]) (6" = 1 mile.) 2 sheets. Repr. [1938.]
(2 sets.) Presented by Mr. J. E. Yerbury [F.] and another source.
For text see books catalogue entry.

PARISH CHURCHES

Thame, Oxon: plan. [? Allen Foxley, del.] Ink D. n.d.
Carlton-in-Lindrick, Notts: measured drawings. A. Foxley, mens.
and del.

6 sheets. Repr. of D. survd. 1904, revised 1913,
redrawn 1937.

Market Weighton, E. Yorks: All Saints: plan. Including alterations
to seating. E. Stephenson, survd.; [A. Foxley], del.—Crickmer and
Foxley, archts.

Repr. of D., hand col. 1929.
Preston, Sussex: measured drawings. C. Hodgson Fowler, survd.;
[pupil of ditto], del.

survd. [c. 1860]; del. [189—].
Presented by Mr. Allen Foxley [Ret. F.].

OTHER DONATIONS, INCLUDING DUPLICATES

Also 26 other guides: to 1 college chapel, 19 parish churches, 1 cathedral,
1 priory, 1 nunnery, & 3 towns or villages. Mostly pamphlets; 2 MSS.
Presented by Mr. Allen Foxley [Ret. F.].

PRESENTED FROM THE LIBRARY OF SYDNEY D. KITSON [F.] BY MISS ELIZABETH AND MISS BARBARA KITSON

ARCHITECTURE

THEORY

SHAW (R. NORMAN) and JACKSON (T. G.), editors S.R. 72.01
* Architecture a profession or an art. Etc. 80. Lond. 1892.
Another copy. With letter from R. Norman Shaw, MS. 1882,
inserted.

HISTORY

ELMES (JAMES) 72.03
* Lectures on architecture, etc.
2nd ed. 80. Lond. 1823. To Loan Library.

BRITTON (JOHN) S.R. 72.03 (42) .033.4/5
* Chronological history and graphic illustrations of Christian
architecture in England, etc. (= Architectural antiquities of G— B—,
vol. v.)

Chronological and historical illustrations of the ancient architecture
of Great Britain, parts title.

In parts as first issued: Nos. i-v.

40. Lond. 1818-19.
10 parts contemplated for whole vol. No title page.
Date of whole work, earliest edition in library (presumably 1st ed.),
1826. The above parts presumably are of that ed.

- CAUMONT (A. DE) 72.03 (44) : 902.6
Statistique monumentale du Calvados.
Vol. i. 'Réimpression' with notes. 80. Caen & Paris. 1898.
- PERROT (G.) and CHIZEZ (C). 72.032 + 7.032
Histoire de l'art dans l'antiquité.
vi. La Grèce primitive et l'art Mycénien.
* English trans. History of art in primitive Greece. Mycenaean art. Trans. by I. Gonino.
2 vols. la. 80. Lond. 1894. To Loan Library.
- ATHENS: BRITISH SCHOOL . . . AT ATHENS 72.032.3 (38 S) : 902.61
Excavations at Sparta, 1924-25. By A. M. Woodward & M. B. Hobling. (From Annual, No. xxvi, 1923-24, 1924-25.)
9½". [Lond.: Macmillan.] [1926 or -27.]
- PHILLIMORE (LUCY) 72.034 (42) .5/8 : 92 W
* Sir Christopher Wren etc.
80. Lond. 1883. To Loan Library.
- DRAWING
- PENNELL (JOSEPH) 72.064 : 741.023-32
* Pen drawing and pen draughtsmen. Etc.
2nd ed. sm. 40. Lond. 1894. To Loan Library.
- BUILDING TYPES
(CIVIL)
- BRIZI (ALFONSO) 725.182 (45 A) + 728.81 (45 A)
Della Rocca di Assisi . . . architettura militare. Studi . . . per commissione della Accademia Provenziana del Subasio etc.
la. 80. Assisi. 1898.
- (RELIGIOUS)
- MACKMURDO (A. H.) 726.54 (42.12) .034 (42) .5/8 : 92 W
* Wren's city churches.
80. Orpington. 1883. To Loan Library.
- 726.54 (42.12) .034 (42) .5/8 : 92 W] .064
- DAVISON (T. RAFFLES), draughtsman
Wren's city churches. . . pencil illustrations . . . Reprinted from The Builder.
12¾". Lond. [1923.]
- BILLINGS (R. W.) 726.6 (42 D)
Illustrations of Durham cathedral.
40. Lond. (1840) 1842.
Imperfect: 46 plates only.
- PERELLI (PIETRO) 726.71 (45 C) SF
L'Abbazia di San Fruttuoso (a Capodimonte, cover title) e le tombe dei Doria.
la. 80. Genoa. [19—.]
- DAVIES (G. S.) 726.825 (45 R) .033 .034
* Renaissance. The sculptured tombs of the fifteenth century in Rome etc.
la. 80. Lond. 1910. To Loan Library.
- (DOMESTIC)
- PEACH (R. E.) 728.3 (42.38 B)
* Historic houses in Bath.
sm. 40. Lond. & Bath. 1883. To Loan Library.
Title-page missing.
- SCHIAPARELLI (ATTILIO) 728.3 (45 F) .033 .034
La Casa fiorentina e i suoi arredi nei secoli xiv e xv.
Vol. i. 80. Florence. 1908.
- DETAILS
- WALL (J. CHARLES) 729.394.1 + 729.913.1
Porches and fonts.
9½". Lond.: Wells Gardner, Darton. 1912.
- ALLIED ARTS AND ARCHEOLOGY
- GALLERY 75.036 (42) : 769
The Gallery of modern British artists; . . . engravings from works of . . . eminent artists . . . Turner [and others]. [By various engravers].
2 vols. 40. Lond. 1835-36.
Vol. ii has also engraved title-page.
- NAPIER (R. W.) 75.036 (42) : 92 T
John Thomson of Duddingston, landscape painter. Etc.
10½". Lond.: Oliver & Boyd. 1919.
- 902.6 (42) (06) (05)
- ROYAL ARCHEOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND
The Archaeological Journal.
Vol. lxxxvi (2nd series, xxxvi) for . . . 1929.
la. 80. Lond. 1930.
Set already in library ends at vol. lxi, 1904.
- DUPLICATES
Also 1 volume, duplicate copy, to Loan Library.

Correspondence

WAR DAMAGE TO PROPERTY

34 Hagley Road,
Stourbridge
28.9.40

To the Editor, JOURNAL R.I.B.A.

SIR,—In assessing the damage to houses, the cost of reinstatement based on prices at March 1939 is to be taken.

If, however, the local authority carries out permanent repairs, the *sum spent* becomes a charge on the property.

It appears, therefore, that the owner who carries out his own repairs is only allowed a figure on the March 1939 basis, whereas the local authority make a charge on the property of the actual cost as carried out during these far more costly times.

Surely there is a very unfair inconsistency in this procedure. It would seem reasonable that the charge on the property should also be only the estimated cost of repairs as at March 1939. It is no more unreasonable to ask that, if a dwelling-house is really wanted, the local authorities should bear a part of the cost, as they have done in providing new houses.

Yours faithfully,

HUGH E. FOLKES

The following letter by the President was sent to the leading London and provincial papers:—

SIR,—Building owners everywhere are realising how important it is that accurate assessments of war damage to their properties can readily be made.

The making of such assessments would be greatly helped if plans of the buildings before damage were available, particularly if such drawings gave constructional details. Records of most newer buildings are already in the hands of owners, architects or local authorities, but records of older buildings can seldom be found.

In such cases owners would be well advised to instruct their architects to make surveys accurate enough to show plans, sections and elevations of the buildings before damage. Elevations might be photographed, but the plans and sections should be measured and drawn.

I am, Sir,

Your obedient Servant,

W. H. ANSELL,

President R.I.B.A.

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COTON,
COULTE
COWIN,
Edwin
COWIN,
grace
CULPIN,
DAVIES,
DUNTON
ELLIS, A
EVE, A.
FAIRBA
FAIRWE
FARMER,
FARROW
Ritles
FIELDEN
FLETT, C

PREVENTION AND RELIEF OF WAR-TIME DISTRESS AMONG ARCHITECTS

*Architects' Benevolent Society,
66 Portland Place,
London, W.1
26.9.40*

To the Editor, JOURNAL R.I.B.A.

DEAR SIR,—It may not be generally known that the scheme of unemployment assistance set up under the provisions of the Unemployment Assistance Act, 1934, has, since the outbreak of war, been extended beyond those normally included in the scheme.

It is now possible for anyone over the age of 16 to apply for an allowance if, as a direct result of the war, they are deprived

of their means of livelihood, or have been evacuated from their homes under a Government plan, and are in need in consequence.

The rates of allowance are on the same basis as the ordinary unemployment allowances, but special circumstances are taken into account. The scheme does not apply to those normally dependent on an enemy alien, or on a person undergoing sentence of imprisonment.

Those wishing to apply for an allowance should enquire at the nearest office of the Ministry of Labour, the address of which can be obtained from the local Post Office. Leaflet B.L.19, issued by the Assistance Board, explains the scheme and the method of application.

Yours faithfully,
B. N. SOLLY,
Secretary

MEMBERS SERVING WITH THE FORCES

This eighth list of members serving with the Forces includes only the names of members whose rank and unit have been notified to the R.I.B.A. It is impossible to guarantee complete accuracy. We shall be glad to receive corrections and additions. Pro-

motions notified to the R.I.B.A. are recorded. For much of this information we cannot be dependent on the serving members themselves and so must rely on the kindness of their friends and relations.

MISSING SINCE JUNE 8

DANIEL, R. C. B. A. [L.], Lieutenant R.N.V.R.

MISSING, BELIEVED KILLED IN ACTION

LEWIS, Peter H. [L.], Flying Officer, R.A.F.

PRISONER OF WAR

KOERNER, Alfred [L.]

UNITS AND RANKS OF SERVING MEMBERS

ADAMS, C. K. [L.], Lieutenant R.N.V.R.
ALP, Wm. [Student], Lieutenant Gen. List.
APPLEGARTH, A. [L.], L/Cpl. D.L.I.
BIDMEAD, G. R. [Student], L/Cpl. R.E.
BOMPAS, C. H. M. [L.], Tpr., Kenya Regt.
BOOTH, Frank [L.], Gnr. R.A.
BOUQUET, D. G. [L.], Tpr. R.A.C.
BOWLER, F. C. [Student], A.C.H. R.A.F.
BRADFORD, W. N. [Student], Gnr. Signaller R.A.
BRINTON, W. Ralph [L.], Lieut.-Cdr. R.N.
BROOKE, J. H. [Student], Cpl. R.A.S.C.
BRYANT, P. A. E. [Student], Gnr. R.A.
CARPENTER, L. J. [L.], Lieut. R.E.
CHAPMAN, W. W. [Student], Capt. R.E.
CHARD, F. V. Scott [L.], Gnr. R.A.
CHARLES, G. V. [L.], Gnr. R.A.
CHURCHILL, W. O. [Student], Capt. The
Worcesters, Regt.
CORNFORD, Henley [L.], Lieut. Royal West
Kent Regt.
COSTER, Cecil W. [L.], P/O. R.A.F.V.R.
COTON, T. J. [L.], Spr. R.E.
COULTER, H. G. [L.], Capt. R.E.
COWIN, D. M. [L.], 2nd-Lieut. S.A.
Engineers.
COWIN, J. N. [L.], 2nd-Lieut. S.A. En-
gineers.
CRAWFORD, E. L. [Student], Spr. R.E.
CULPIN, Clifford E. [L.], 2nd-Lieut. R.E.
DAVIES, D. C. [Student], Spr. R.E.
DUNTON, J. G. [L.], Bdr. R.A.
ELLIS, A. G. [Student], Cpl. S.A. Engineers.
EVE, A. S. [L.], Gnr. R.A.
FAIRBAIRN, R. R. [L.], Capt. R.E.
FAIRWEATHER, W. J. [L.], Gnr. R.A.
FARMER, S. A. [L.], Lieut. R.E.
FARROW, J. W. [L.], Lieut. The Kaffrarian
Rifles (S. Africa).
FIELDEN, Frank [L.], Officer Cadet R.E.
FLETT, G. [L.], Guardsman, Scots Guards.

FLOYD, J. P. [L.], Spr. R.E.
FLURY, B. R. [Student], Sgt. Observer R.A.F.
FOY, J. D. [Student], Spr. Cadet R.E.
FRANKS, R. H. [L.], Acting Staff-Sergt. R.E.
FRENCH, Fred. W. [Student], Spr. R.E.
GAUNT, A. W. [L.], Spr. R.E.
GIBBIN, C. C. M. [Student], Gnr. R.A.
GOORNEY, J. [Student], Gnr. R.A.
GRIFFITHS, H. S. [L.], A.C.2 R.A.F.
HALL, Herbert [L.], Gnr. R.A.
HANNAM, F. L. [L.], L/Cpl. R.E.
HAYERS, Norman [Student], Officer Cadet,
Hampshire Regt.
HERRON, Fred. [L.], P/O. R.A.F.V.R.
HEUGHL, P. W., Pte. Prince Alfred's Guard
(S. Africa).
HOLT, John [L.], Spr. R.E.
HURLEY, Louis F. [L.], L. Sgt. R.A.
HUSAIN, S. M. [Student], Gnr. R.A.
JAMES, E. E. [L.], Gnr. R.A.
JAWITZ, A. [L.], Mounted Engineers (S.
Africa).
JENKINS, A. H. H. [L.], A.C.2 R.A.F.V.R.
JOSEPH, P. L. [L.], Spr. R.E.
JUDGES, A. C. [Student], Spr. R.E.
JURY, A. G. [L.], Acting Staff-Sergt. R.E.
KINTON, R. K. [L.], L/Bdr. R.A.
LEVY, Eric [L.], Spr. R.E.
LEWIN, F. A. [Student], Pte. The London
Scottish, The Gordon Highlanders.
LEWIS, I. J. [L.], Spr. R.E.
LIVERSIDGE, P. H. [Student], 2nd-Lieut.
Yorks. and Lancs. Regt.
LLOYD, J. E. [Student], Spr. Cadet R.E.
LONGBOTTOM, Lionel [Student], L/Cpl. R.E.
MADDISON, W. G. [L.], Gnr. R.A.
MALLORIE, J. T. [L.], Pte. R.A.M.C.
MATTHEWS, V. R. [Student], A.C.2 R.A.F.
MILLER, E. J. [Student], Gnr. R.A.
MOORE, A. D. [Student], Staff-Sergt. R.E.
MOORE, Douglas D. [L.], Gnr. R.A.

MORTON, K. [L.], Driver R.E.
NISBET, Arthur G. [L.], Spr. R.E.
PATERSON, R. W. [L.], Gnr. R.A.
PEARSON, G. M. [Student], Staff-Sergt. R.E.
PEGNUM, W. A. [Student], Capt. R.A.O.C.
PENNY, W. H. M. [L.], Sub-Lieut. R.N.V.R.
PENNY, C. R. [L.], A.C.2 R.A.F.V.R.
PHILLIPS, G. G. [L.], Lieut. R.E.
PHILLIPS, R. L. [L.], A.C.2 R.A.F.V.R.
PITE, Robert W. [L.], P/O. R.A.F.
PITT, R. A. [Student], 2nd-Lieut. R.A.
PLATT, Harry [L.], Capt. R.E.
POWELL, Maynard H. [L.], 2nd-Lieut. R.E.
PRICE, G. R. [Student], Sub-Lieut. R.N.V.R.
PRIVETT, K. [Student], 2nd-Lieut. R.E.
RAYNHAM, J. E. [Student], Gnr. R.A.
REW, James F. [Student], A.C.2 R.A.F.
RIDER, N. T. [L.], Gnr. R.A.
RUNNICKES, C. G. [L.], Officer Cadet R.E.
SAYCE, G. H. [Student], Spr. R.E.
SCARLETT, Frank [L.], P/O. R.A.F.V.R.
(Intelligence).
SILK, Guy W. [L.], Lieut. A.M.P.C.
SLADE, V. L. [Student], Ft. Mech. R.A.F.
SLATER, J. M. [Student], Spr. R.E.
SMALE, S. E. [L.], L/Cpl. The Kaffrarian
Rifles (S. Africa).
STAZIKER, Fred. [Student], Signaller, Royal
Corps of Signals.
STURROCK, Allister [L.], P/O. R.A.F.
SUMMERS, Norman [L.], Spr. R.E.
THOMAS, Alun A. [L.], Tpr. Royal Tank Regt.
UPTON, H. C. [L.], Lieut. S.S.R.N.V.R.
WALKER, G. E. [L.], Flying Officer R.A.F.
WEBSTER, Douglas A. S. [L.], 2nd-Lieut.
R.A.
WILLS, F. B. [Student], Gnr. R.A.
WILSON, H. C. [L.], Cadet R.E.
WOOD, H. M. Dale [L.], Officer Cadet R.A.
WRIGHT, Hubert [L.], P/O. on Probation
R.A.F.V.R.

Membership List

ELECTION: OCTOBER 1940

The following candidates were elected in October 1940:—

AS FELLOWS (4)

BUTLER: RONALD McCONNAL [J. 1930], Dudley.
 THWIN: U. HLA, A.M.Inst.C.E. [J. 1935], Rangoon, Burma.
 WINTER: PERCY HAROLD, F.S.I. [J. 1926], Jerusalem, Palestine.
 And the following Licentiate who has passed the qualifying Examination:—
 GALLANNAUGH: BERTRAM WILLIAM LEONARD, Purley, Surrey.

AS ASSOCIATES (24)

BAYNE: MISS ANNIE MARGARET, Edinburgh.
 BUTLER: JOHN THOMAS, Newport, Mon.
 CURWEN: MISS DOROTHY ZENA, B.A.(Arch.), E. Griqualand, C.P., South Africa.
 DAYKIN: ALEC, Mansfield.
 EVERY: CHARLES HENRY, Egginton, near Derby.
 FENNEL: THOMAS ELLIOTT, Fence Houses, Co. Durham.
 FIDELL: MISS MARGARET, Monkscaton.
 FOOTE: GEORGE EDWARD, Edinburgh.
 GEDRYCH: THOMAS DAVID, Dip.Arch.(Cardiff), Cardiff.
 GWILLIAM: DENIS ARCHER, Cardiff.
 HENDERSON: WILLIAM ANTHONY, B.Arch.
 HOOD: WILLIAM, Tynemouth.
 KENNEDY: KENNETH, Newcastle-upon-Tyne.
 MACKENZIE: CHARLES ROSS, Edinburgh.
 OXLEY: RALPH, Sheffield.
 PATON: JOHN CHARLES, Sydney, N.S.W.
 PAYTON REID: MISS MARY LOUISA JEAN, Edinburgh.
 PLUNKETT: NORMAN WALDO, B.Arch., Armadale, Australia.
 RENTON: ANDREW, Dunfermline.
 RUSH: VINCENT JOHN, Tyldesley.
 SHORE: THOMAS GEORGE FREDERICK, Dip.Arch.(Liverpool), Liverpool.
 SNOWDEN: AUSTYN GUY, Dip.Arch.(Leeds), Leeds.
 SPAIN: KENNETH BAYER, Sydney, N.S.W.
 VOS: ERIC FRANCIS, Port Elizabeth, South Africa.

AS LICENTIATE (1)

OXLEY: HYLTON ROY, Singapore.

ELECTION: NOVEMBER 1940

An election of candidates for membership will take place in November 1940. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Byelaws are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary R.I.B.A. not later than Thursday, 31 October.

The names following the applicant's address are those of his proposers.

AS HON. ASSOCIATES (2)

BARRY: GERALD REID, (Editor and Director of the "News Chronicle.")
 The Forge House, Sutton Pulborough, Sussex. Proposed by the Council R.I.B.A.
 JOHNSTON: HENRY JOHN CHESNEY, President of the Building Industries National Council, 56 Hanover Gate Mansions, Regent's Park, N.W.1. Proposed by the Council.

AS FELLOW (1)

COOPER: JOHN BRIAN [J. 1925], Coleridge Chambers, 177 Corporation Street, Birmingham; 31 Hamilton Avenue, Harborne, Birmingham. Lt.-Col. H. G. Wicks, S. N. Cooke and S. P. Taylor.

AS ASSOCIATES (72)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

ALMROTT: ANDREW FREDERICK [Final], 21 Hall Lane, Hendon, N.W.4.
 T. E. Scott, W. T. Curtis and C. D. Andrews.
 ALTHAM: GEORGE BERNARD, Dip.Arch.(Distinction)(Liverpool) [Univ. of Lvp.], 79 Lancaster Crescent, Newcastle-under-Lyme, Staffs.
 Prof. L. B. Budden, E. R. F. Cole and J. E. Marshall.
 ANNAND: GEORGE [Final], 93 Dundrennan Road, Glasgow, S.2.
 D. B. Hutton, J. Stewart and W. J. Blain.
 AUCKLAND: NORMAN JOHN, Dip.Arch. [Welsh School], 15 Pen-y-lan Road, Cardiff.
 W. S. Purchon, C. F. Bates and E. C. M. Willmott.
 BANCROFT: CHARLES NIEL [Victoria Univ., Manchester], 20 Parsonage Street, Hyde, Cheshire. Prof. R. A. Cordingley, F. Jones and C. G. Agate.
 BARRAGAN: JOSÉ ERNESTO, B.A.(Arch.) [Bartlett School], 92 Chepstow Road, W.2. Prof. A. E. Richardson, H. O. Corfiato and L. S. Stanley.

BENSON: MISS BETTY CHRISTINE [Univ. of Sheffield], Cream Cottage, Croft-on-Tees, Nr. Darlington. S. Welsh, H. B. S. Gibbs and H. B. Leighton.
 BIDMEAD: GEORGE REGINALD [Final], 224 Stoney Lane, Sparshill, Birmingham. H. Jackson, R. Edmonds and J. B. Surman.
 BRADDOCK: PETER HOUGHTON [Arch. Assn.], Tower House, 54 High Street, Wimbledon, S.W.19. C. L. Gill, A. M. Chitty and G. A. Jellicoe.
 BRYANT: PETER ANTHONY ELWOOD [Leeds School], Brookside Cottage, Marston Magna, Somerset. J. C. Procter, G. H. Foggitt and F. L. Charlton.
 BULLMORE: GILBERT [Final], 5 Cannon Place, Hampstead, N.W.3. S. Hamp, G. M. Trench and Chas. J. Mole.
 BYFORD: MISS JEAN TALBOT, B.Arch.(Hons.) [Univ. of Lvp.], 11 Auckland Road, Liverpool, 18. Prof. L. B. Budden, J. E. Marshall and A. E. Shennan.
 CAUSON: ALBERT HENRY [Final], 143 Gilbertstone Avenue, Yardley, Birmingham, 26. L. S. Stanley, A. Nisbet and J. F. Walsh.
 CHANNING: LESLIE THOMAS [Final], 20 Runnymede Road, Twickenham, Middlesex. J. Addison, R. E. Enthoven and applying for nomination by the Council under Byelaw 3 (d).
 COCHRANE: FRANCIS ALFRED ARTHUR [Arch. Assn.], Melbury Cottage, Melbury Road, W.14. H. S. Goodhart-Rendel, A. W. Kenyon and R. E. Enthoven.
 COOKE-YARBOROUGH: MICHAEL HUMFREY [Arch. Assn.], Orchards, Kingwood Common, Henley-on-Thames, Oxon. G. A. Jellicoe, A. W. Kenyon and R. E. Enthoven.
 COX: ANTHONY WAKEFIELD [Arch. Assn.], 28 Gloucester Road, Teddington, Middlesex. G. A. Jellicoe, A. W. Kenyon and R. E. Enthoven.
 CUBITT: JAMES WILLIAM ARCHIBALD, B.A. [Arch. Assn.], Graitney, Camberley, Surrey. G. A. Jellicoe, C. L. Gill and J. Leathart.
 DAVIES: JOHN SELBY [Welsh School], 58 De-Burgh Street, Cardiff. W. S. Purchon, P. Thomas and T. A. Lloyd.
 DAVIS: DAVID ISAAC STRATTON [Final], Ashcroft, Oak Lane, Claygate, Surrey. G. D. Gordon Hake, C. W. Yates and Col. N. H. Waller.
 DEARDEN: GORDON BECKWITH [Victoria Univ., Manchester], 78 Great Clowes Street, Salford, 7, Lancs. Prof. R. A. Cordingley, C. G. Agate and H. T. Seward.
 DONALD: JOHN HUTCHISON [Robert Gordon's Technical College, Aberdeen School], 112 High Street, Montrose. J. A. O. Allan, J. B. Nicol and A. G. R. Mackenzie.
 DUNFORD: FRANK WILLIAM [Final], Architect's Dept., Town Hall, Ilford; 321 Sutton Common Road, Sutton, Surrey. A. Sunderland, E. Williams and J. Addison.
 EDWARDS: ERNEST JOHN, P.A.S.I. [Final], "Birkby," 37 Kingsway, Peto Wood, Kent. W. R. H. Gardner, C. Newman and S. W. Ackroyd.
 ELDER: ALBERT JOSEPH [Final], 6 Pulcroft Road, Hesse, E. Yorks. H. Andrew, F. J. Horth and H. E. Horth.
 FERGUSON: RICHARD PERCIVAL [Arch. Assn.], "Rydal," Lynford Avenue, Runwell, Essex. N. Martin-Kaye, C. S. White and G. A. Jellicoe.
 GOALEN: GERARD THOMAS [Univ. of Lvp.], 24 Ingestre Road, Oxon, Birkenhead, Cheshire. Prof. L. B. Budden, E. R. F. Cole and F. N. Velarde.
 GODFREY: WALTER EMIL, B.A.(Oxon.) [Final], 26 Ebury Street, S.W.1. W. H. Godfrey, J. Addison and E. P. Wheeler.
 GRIFFIN: JOHN OSWALD [Final], c/o Charles Griffin & Co., 42 Drury Lane, W.C.2. T. E. Scott, B. H. Sutton and M. Lyon.
 HALL: VINTON [King's College (Univ. of Durham), Newcastle-upon-Tyne], 1 West Mount, Chester Road, Sunderland. W. B. Edwards, W. Milburn and Geo. T. Brown.
 HANNAM: RICHARD JOHN [Arch. Assn.], 7 High Street, Foots Cray, Sidcup, Kent. G. A. Jellicoe, A. W. Kenyon and C. S. White.
 HARDMAN: CHARLES NORTON [Leeds School], 11 Gawber Road, Barnsley, Yorkshire. F. L. Charlton, G. H. Foggitt and B. R. Gribbon.
 HOBSON: LESLIE JAMES [Special Final], "Woolverstone," Woodlands Avenue, Weybourne, Farnham, Surrey. L. S. Stanley, G. H. Williams and H. J. Stribling.
 HODGSON: CHARLES WILLIAM [Final], 34 Capel Road, Forest Gate, E.7. A. A. H. Scott, W. L. Twigg and W. J. Lewis.
 HOGLEY: CHARLES HERBERT, Dip.Arch.(Leeds) [Leeds School], "Rock View," Burnlee, Holmfirth, near Huddersfield. J. C. Procter, C. Hickson and N. Culley.
 HOLBROOK: LEONARD CHARLES [Final], 166 Shirley Road, Croydon, Surrey. H. A. Welch, F. J. Lander and J. Addison.

HORSFIELD : ALEXANDER JAMES [Final], c/o 12 Western Court, Nether Street, West Finchley. Applying for nomination by the Council under Byelaw 3 (d).

HUGGINS : FREDERICK RALPH [Final], 102 Newtown, Trowbridge, Wilts. C. W. Box, G. D. G. Hake and E. H. Button.

JENKINSON : JOHN MARK MANSELL [Univ. of Sheffield], 10 Rundle Road, Sheffield, 7. S. Welsh, J. M. Jenkinson and J. A. Teather.

LANE : ERIC ALFRED JACK [Final], 31 South Drive, Cheam, Surrey. H. J. Axten, W. B. Simpson and L. R. Guthrie.

LEAH : EGBERT ALFRED [Final], Longmead, 57 Merevale Road, Gloucester. C. W. Yates, Lt.-Col. N. H. Waller and L. W. Barnard.

LEVI : WILLIAM ELDER [Edinburgh College], 12 Northumberland Street, Edinburgh. A. A. Foote, F. C. Mears and J. Wilson.

LEVY : ALBERT PHINEAS [Final], 110 Holmleigh Road, Stamford Hill, N.16. C. E. Simmons, J. O. B. Hitch and J. Addison.

LITTLE : JAMES [Univ. of Lvp.], 1 Canning Street, Liverpool, 8. Prof. L. B. Budden, J. E. Marshall and E. R. F. Cole.

MABLEY : PHILIP JOHN [Final], 48 College Avenue, Maidenhead, Berks. H. Lidbetter, E. Maufe and J. Addison.

MACFARLANE : ROBERT ALEXANDER [Special Final], 68 Haytor Road, Wrexham, Denbighshire. L. S. Stanley and applying for nomination by the Council under Byelaw 3 (d).

MCGEOCH : RONALD VICTOR, B.Arch. [Univ. of Lvp.], 1 Buckingham Road, Tue Brook, Liverpool, 13. Prof. L. B. Budden, H. Thearle and J. E. Marshall.

MCCURRIE : HARRY ANDERSON [Special Final], Heathcote, 2 Cooden Avenue, Leicester. K. Palmer, L. G. Hannaford and G. N. Hill.

PARSONS : ROLAND WILLIAM BRITTON [Final], 35 Liberia Road, Highbury, N.5. R. G. Brocklehurst, E. A. L. Martyn and J. Dovaston.

REXILIUS : PAUL HUGO GEORGE [Final], 37 Clipstone Street, Great Portland Street, W.1. W. T. Curtis, C. D. Andrews and H. W. Burchett.

RICHARDSON : DOUGLAS WILLERTON [Special Final], 28 Whiteford Road, Plymouth. Applying for nomination by the Council under Byelaw 3 (d).

RODHAM : KENNETH LONSDALE [King's College (Univ. of Durham), Newcastle-upon-Tyne], 25 Bath Terrace, Gosforth, Newcastle-upon-Tyne, 13. W. B. Edwards, Lt.-Col. A. K. Tasker and R. N. Mackellar.

ROSS : HUGH [Glasgow School], 74 Parkhead Street, Motherwell, Lanarkshire. T. H. Hughes, A. Balfour and T. J. Beveridge.

ROYCE : NORMAN ALEXANDER [Final], 276 Kent House Road, Beckenham, Kent. J. Addison, E. Hastie and K. M. Winch.

SANDS : DESMOND OSSITER [Final], c/o Agent-General for Western Australia, Savoy House, Strand, W.C.2. J. Emberton, H. A. Welch and F. J. Lander.

SARGISON : VICTOR JAMES [Final], 91 Woodstock Avenue, Golders Green, N.W.11. W. T. Curtis, H. W. Burchett and D. Robertson.

SELBY : LAURENCE JOHN [Special Final], 39 Hadleigh Road, Leigh-on-Sea. N. Martin-Kaye, D. H. Burles and P. G. Hayward.

SIMSBY : ALFRED (Northern Poly., London), 13 Highbury Hill, Highbury, N.5. T. E. Scott, Col. M. K. Matthews and L. S. Sullivan.

STRANG : ALEXANDER [Glasgow School], Randyford, Falkirk. T. H. Hughes, W. Ross and W. J. Smith.

TAYLOR : PERCY [Univ. of Lvp.], 90 Dacy Road, Liverpool, 5. Prof. L. B. Budden, F. X. Velarde and H. Thearle.

TEMPERLEY : MISS ELISABETH, Dip.Arch. [Univ. of Lvp.], Green Rigg, Patterdale, Westmorland. Prof. L. B. Budden, J. E. Marshall and R. N. Mackellar.

THOMSON : GEORGE [Special Final], "Alston," Kennoway Road, Windygates, Fife. G. B. Deas, J. Clayton and J. D. Swanston.

THORP : CHARLES HERBERT [Final], Bank End, Holmfirth, Huddersfield. N. Culley, G. H. Foggitt and B. R. Gribbon.

THURLEY : PHILIP [Univ. of Lvp.], 30 Hillcrest Road, Great Crosby, Liverpool, 23. Prof. L. B. Budden, J. E. Marshall and F. X. Velarde.

TURNER : NEWMAN GEORGE EFFINGHAM [Final], 53 Wallace Road, Coventry. W. S. Hattrell, L. S. Stanley and applying for nomination by the Council under Byelaw 3 (d).

TWIGG : LAURENCE HENRY, Dip.Arch.(Glas.) [Glasgow School], 20 Victoria Street, Alloa, Clackmannanshire. T. H. Hughes, E. S. Bell and A. M. McMichael.

WINEY : THOMAS LESLIE [Final], 53 Cardinal Avenue, Morden, Surrey. Sir J. G. West, P. K. Hanton and J. Petter.

WOSPER : NORMAN LYN AUGUSTUS [Univ. of Lvp.], Plas Coch, Llanychan, Ruthin, N. Wales. Prof. L. B. Budden, J. E. Marshall and E. R. F. Cole.

WATERHOUSE : MISS BARBARA CARMICHAEL [Victoria Univ., Manchester], Stand Lodge, Bramhall, Cheshire. Prof. R. A. Cordingley, C. G. Agate and B. Waterhouse.

WATSON : JAMES FLETCHER [Final], 37 Cranley Gardens, S.W.7. C. Upcher, S. Tatchell and S. J. Wearing.

WHITE : MISS JOYCE ELIZABETH [Univ. of Lvp.], 26 Old Church Street, Chelsea, S.W.3. Prof. L. B. Budden, E. R. F. Cole and H. Thearle.

WILSON : WILLIAM GEORGE [Special Final], 76 The Woodlands, Beulah Hill, Upper Norwood, S.E.19. R. Phillips, A. S. Snell and F. G. A. Hall.

AS LICENTIATES (21)

ANDERS : THOMAS, 98 and 100 High Road, Ilford ; 11 Melbourne Road, Ilford. F. G. Fauch, Edward Meredith and W. J. Lewis.

BROWN : ERIC ERNEST, 24 Carlton Crescent, Southampton ; 10 Regent Square, W.C.1. G. A. Jellicoe, R. E. Enthoven and W. J. Mountain.

CLIFFORD : LEONARD, c/o Messrs. W. B. Start & Hall, 12 Victoria Street, Nottingham ; 45 St. Leonards Drive, Wollaton, Nottingham. A. E. Eberlin, H. T. Seward and F. A. Broadhead.

COLIN : WILLIAM HENRY, O.B.E., Ministry of Health ; Highcroft, Pottersend, Berkhamsted, Herts. A. L. Roberts, A. Scott and Lt.-Col. P. Hopkins.

DACOMBE : HENRY JOHN, Lloyds Bank Chambers, Boscombe, Bournemouth ; 88 Hengistbury Road, Southbourne, Bournemouth. W. J. Mountain and the President and Hon. Secretary of the Hampshire and Isle of Wight Architectural Association under the provisions of Byelaw 3 (d).

DALTON : GEORGE SYDNEY RAMSEY, Wellington Buildings, The Strand, Liverpool ; 15 Berkeley Drive, Wallasey, Cheshire. G. Fraser, O. D. Black and H. A. Dod.

DAVIS : FRANK CECIL, 6a Guildhall Street, Lincoln ; "Fenleigh," Skellingthorpe, Lincoln. S. P. Dales, L. F. Bullivant and W. G. Watkins.

GALPIN : CHARLES, Rivets Estate Works Dept., Hinton St. Mary, Dorset ; Fiddleford, Blandford, Dorset. L. M. Austin, W. J. Mountain and A. G. S. Bailey.

GIBSON : BERNARD GEORGE, Architects' Dept., Stag Brewery Co., Pimlico ; 2 Plantagenet Close, Worcester Park, Surrey. A. J. Seal, P. Hardy and A. W. Blomfield.

HARDOUN : MAURICE EUGENE, c/o Garrison Engineer, Puddletown Farm, Dorset ; 74 Eastdean Avenue, Epsom, Surrey. P. D. Hepworth, G. M. Trench and W. S. Grice.

HILL : ERIC DAVY, Dyer Street House, Cirencester, Glos. ; Masonic Flais, The Avenue, Cirencester. Major E. Cole, L. W. Barnard and G. H. Ryland.

HYETT : FREDERICK LESLIE, 54 Sandringham Avenue, Merton Park, S.W.20. H. St. J. Harrison, H. Robertson and J. M. Easton.

KAUFMANN : EUGEN CARL, 4 Bloomsbury Square, Holborn, W.C.1 ; 24, Pentley Park, Welwyn Garden City, Herts. E. M. Fry, Prof. P. Abercrombie and L. de Soissons.

LITHERLAND : RICHARD SPENCER, 10 High Street, Burton-on-Trent ; 8 Fountain Street, Manchester ; Radhurst Grange, Burton-under-Needwood, Burton-on-Trent. F. M. Palmer and applying for nomination by the Council under the provisions of Byelaw 3 (d).

POTTS : WILLIAM ERNEST NEWBY, 17 and 18 Railway Approach, London Bridge, S.E.1 ; Hare Street Cottage, Hare Street, near Buntingford, Herts. P. C. Boddy, H. I. Ashworth and H. W. Cuttrey.

ROSE : JONATHAN, Borough Surveyor's Dept., Municipal Buildings, Greenfield Street, Hyde ; 29 Henry Street, Hyde. Applying for nomination by the Council under the provisions of Byelaw 3 (d).

SIMMS : ALFRED ERNEST HATTEN, 323 High Street, West Bromwich ; "Hargate House," West Bromwich. W. T. Benslyn, H. Jackson and R. Edmonds.

STANTON-JAMES : LIONEL CHARLES, Architect's Dept., London County Council, Westminster Bridge, S.E.1 ; "Melita," Tudor Way, Petts Wood, Kent. H. B. Mackenzie, B. H. Toms and A. H. Barnes.

VOGE : WILLIAM JAMES, Architect's Dept., Co-operative Wholesale Society, Ltd., 1 Balloon Street, Manchester ; 45 Fountain Street, Birkenhead, Cheshire. W. A. Johnson, J. E. Kewell and H. T. Seward.

WEST : JOHN CHARLES PERCY, Little Simons, Clare Hill, Esher, Surrey ; 46 Ingleboro' Drive, Purley, Surrey. G. B. Imrie, H. H. Scott-Willey and H. C. Fread.

WHATMOUGH : BERTRAM GEORGE, 214 Bishopsgate, E.C.2 ; 92 Lingfield Crescent, Eltham, S.E.9. G. G. Winbourne, T. E. Scott and F. E. Mennie.

ELECTION: JANUARY 1941

An election of candidates for membership will take place in January 1941. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary R.I.B.A. not later than Monday, 13 January 1941.

The names following the applicant's address are those of his proposers. The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

AS ASSOCIATES (5)

- BROWN: DANIEL MACLAREN [Passed a qualifying Examination approved by the I.S.A.A.], P.O. Box 268, Port Elizabeth, South Africa. W. J. McWilliams, V. T. Jones and F. O. Eaton.
- LE ROTH: HAROLD HERSCH, B.Arch. [Passed a qualifying Examination approved by the I.S.A.A.], Box 7643, Johannesburg, South Africa. S. C. Dowsett, R. Howden and A. S. Furner.
- PARKER: ROBERT SPENCER, B.Arch. Rand. [Passed a qualifying Examination approved by the I.S.A.A.], Box 138, Salisbury, S. Rhodesia. R. Howden, A. S. Furner and F. L. H. Fleming.
- STERN: MILTON FREDERICK, B.A. (Arch.) [Passed a qualifying Examination approved by the I.S.A.A.], Grand Hotel, Muizenberg, Cape, South Africa. F. K. Kendall, H. J. Brownlee and F. M. Glennie.
- THOROLD-JAGGARD: WILLIAM [Univ. College, Auckland, N.Z.], 20-22 Grey Street, Palmerston North, New Zealand. Applying for nomination by the Council under Byelaw 3 (d).

Notices

THE USE OF TITLES BY MEMBERS OF THE ROYAL INSTITUTE

In view of the passing of the Architects Registration Act 1938, members whose names are on the Statutory Register are advised to make use simply of the title "Chartered Architect" after the R.I.B.A. affix. The description "Registered Architect" is no longer necessary.

The attention of members is also drawn to Counsel's opinion on the use of the affixes F., A. and L.R.I.B.A. by unregistered persons printed on page 190 of the June issue of the JOURNAL.

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the next available election they should send the necessary nomination forms to the Secretary R.I.B.A. as soon as possible.

THE R.I.B.A. REGISTER OF ASSISTANTS SEEKING ENGAGEMENTS

Members and Students of the R.I.B.A. and the Allied and Associated Societies are reminded that a Register of Assistants seeking engagements is kept at the offices of the Royal Institute.

An assistant seeking employment should obtain from the Secretary R.I.B.A. the necessary form on which particulars must be given as to the applicant's age, qualifications, salary required, references, etc.

The application will hold good for one month from the date of receipt, after which it must be renewed unless the applicant has meanwhile obtained employment.

Architects, whether members of the R.I.B.A. or not, will be furnished on application with the names and addresses of persons desiring employment as assistants, improvers or clerks of works as the case may be. Architects applying for assistants should give the following particulars of their requirements: (1) whether temporary or permanent engagement; (2) junior or senior assistants; (3) particulars of duties and style of work; (4) salary offered.

CESSATION OF MEMBERSHIP

Under the provisions of Byelaw 21 the following have ceased to be members of the Royal Institute:—

As Fellows:

John Sydney Brocklesby.	Herbert Reginald Cowley.
Joseph Henry Hirst.	Oliver Frederick Savage.
William James Walker Todd.	Robert Jamieson Troup.

As Associates:

Alfred George Armstrong.	Cornelius James Alexander
John Alexander Black.	Kelder Buysman.
William Vernon Coupland.	George James Douglas Cowley.
Geoffrey Albert Crockett.	Carmen Joseph Dillon.
Alastair Stewart Foster.	John James Bayne Gibb.
Harry Vernon Godsall.	Amy Muriel Hargroves.
Frederick Walter Harper.	William Robert Hutcheson.
Bernard Jessop.	David Edgar Lloyd.
Ralph Stephenson Lavers.	John Bernard Mendham.
Eric Alexander Hector MacDonald.	Annon Vivien Pilichowski.
Frank Page Oakley.	Cyril Edward Power.
William Charles Powell.	John Grisedale Sidbottom.
Jean Shufflebotham.	Douglas Rogers Stark.
Edgar Allan Davey Tanner.	Jack Scott Thompson.
Winston Walker.	Charles Sydney Whatmore.
William Norman Worrall.	Tom Brian Wrathmell.
Percy Billington.	

Competitions

COMPETITION FOR DESIGN FOR PAVILION
NATIONAL EISTEDDFOD OF WALES—COLWYN BAY,
1941

The Council of the National Eisteddfod offer prizes of £75 and £25 for competitive designs for a standardised pavilion to seat 12,000 with the necessary stage and other accommodation.

The intention is to encourage the planning and design of a modern type of building that can be taken down, transported and re-erected from year to year in various centres.

The Council of the National Eisteddfod have appointed as adjudicators Mr. Percy E. Thomas [P.P.] and Mr. T. Alwyn Lloyd [F.]. The conditions drawn up by them can be supplied to those who apply to the Secretary, Eisteddfod Office, Colwyn Bay, before 1 March 1941.

FORTHCOMING COMPETITION

WHITEHAVEN: NEW MUNICIPAL BUILDINGS

Assessor: Mr. J. C. Procter [F.] (Leeds).

MEMBERS' COLUMN

PRACTICES AND ADDRESSES

MR. CHARLES M. C. ARMSTRONG [F.] and Mr. Alfred H. Gardner [I.], of Warwick and Coventry, have dissolved partnership by mutual consent. Mr. Armstrong is retiring from practice and Mr. Gardner hopes to resume work in Coventry after the war. Meanwhile, any enquiries should be addressed to 39 High Street, Warwick.

FROM 29 September Messrs. Henry Tanner's West End office has been closed and their business is now conducted from their City office, 34 Fenchurch Street, E.C.3.

MR. W. H. GODFREY has removed from Lewes House to Thebes, Church Lane, Lewes, Sussex. Private letters (and business communications for Wratten & Godfrey) should be sent to the new address. The telephone number will remain Lewes 268.

MR. A. B. GRAYSON [F.], A.A.Dipl., who has had to abandon his practice in Jersey on account of enemy occupation, has opened an office at 7 Bridge Street, Bath, where he will be pleased to receive trade catalogues, etc.

MR. L. K. NANDWANA [Student] has commenced practice at 346 Albert Building, Fort, Bombay. Telephone: Office, 25623; Residence, 43037.

MR. C. BIRDWOOD WILLCOCKS, A.M.T.P.I. [F.], has changed his address to 47 St. Peter's Avenue, Caversham Heights, Reading, Berks. Telephone No.: Reading 72255.

HELEN MOIR [I.], wife of Sub.-Lt. B. L. Moir [I.], R.N.V.R. gave birth to a daughter on 27 August at Mayroyd Bamford, Rochdale.

LODGING WANTED

MEMBER wishes to know of lodging in home of another member in Ealing or West London where his daughter, working in Air Ministry, can lodge. Can afford to pay about 25s. per week for bed, breakfast and supper.—Reply Box 3100, c/o Secretary R.I.B.A.

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